The Golden Hands Encyclopedia of CRAFTS

The complete guide to traditional and modern home crafts

Volume 4

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Golden Hands Encyclopedia of
CRAFTS

Marshall Cavendish

INSTITUTE OF EDUCATION FOR WOMEN
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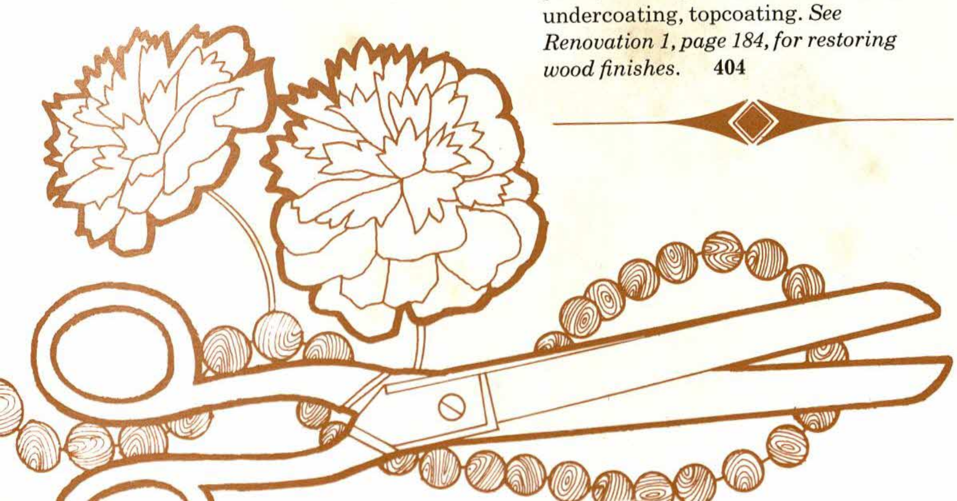

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Paper 12. Materials at stationers and art supply shops.

Clay 8. Grog available at Fulham Pottery, 210 New Kings Rd, SW6.

Clay 9. All natural clays at Fulham Pottery, 210 New Kings Rd, London SW6.

Clay 10. Plaster of Paris available in 3kg (7 lb) bags from branches of Boots the chemists. Also at builders' merchants and dental suppliers. Vinamould at handicraft shops. *Vinamould and Plaster of Paris also by mail order from Alec Tiranti Ltd, 70 High St, Theale, Berkshire (home and overseas mail order only) or from 21 Goodge Place, London W1 for personal shoppers.

Embroidery 4. Anchor 6-stranded cotton at Royal School of Needlework, 25 Princes Gate, London SW7 who also offer mail order service for Great Britain and rest of world.

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Weaving 5. Craftsman's Mark Yarns, Trefnant, Denbigh, LL16 5UD, North Wales, (natural wools). William Hall & Co. (Monsall) Ltd, 177 Stanley Rd, Cheadle Hulme, Cheshire FK8 6RF (cottons, Swedish wools and linens). T. M. Hunter Ltd, Sutherland Wool Mills, Brora, Scotland KW9 6NA (Tweed wools). (also offer mail order). J. Hyslop Bathgate & Co. Victoria Works, Island St, Galashiels, Scotland (mainly wool), send large SAE. Texere Yarns, 9 Peckover St, Bradford BD1 5BD (mainly cotton). Dryad Ltd, PO Box 38, Northgates, Leicester, (cotton & wool in bright colours, offer mail order). The Handweaver Studio & Gallery, 29 Haroldstone Rd, London E17. Hobby Horse (see under glass) PVA at Dryad Ltd, (see above).

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Dyeing 3. Skirt at Laura Ashley, 9 Harriet St, London SW1, and branches throughout the country.

Carpentry 6. All materials at DIY shops and hardware stores.

Printing 6. Chinese ink sticks and papers at Collet's Chinese Gallery, 40 Great Russell St, London WC1. Japanese mulberry papers (rice papers) at Paperchase, 216 Tottenham Court Rd, London W1 (both offer mail order).

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Home herbalist 2. All herbs, oils, and fixatives and pot-pourri at Culpeper House Ltd, 21 Bruton St, London W1, or by mail order from Culpeper Ltd, Hadstock Rd, Linton, Cambs. CB1 6NJ, and at G. Baldwin & Co. 173 Walworth Rd, London SE17, (offer mail order service, send SAE for list of oils) and at Jackson's of Piccadilly, 171 Piccadilly, London W1, who also sell fresh herbs.

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Marbling 1. Banana oil-based marbling colours at Mista Bright, 24 Wilbury Grove, Hove (can be ordered direct in packets of six colours). Glass bowl at Heals.

Mosaic 2. Metal frames at Michel & Polgar Ltd, 41 Blandford St, London W1. Mosaic sold by square foot at Reed-Harris, Riverside House, Carnwath Rd, London SW6 and 85 Binns Road, Liverpool. Also at Edgar Udny, 83 Broadway, Vauxhall, London SW8 (colour leaflets available) and Proctor & Lavender, Bridge Estate, Lode Lane, Solihull, W. Midlands. Plants at Selwyn Davidson, 31 Berwick St, London W1. Glasses at David Mellor, 4 Sloane Square, London SW1. Flokati at Habitat, 206-222 Kings Road, London, SW3.

Metrication

In this volume you will find two systems of measurement. The first set of figures refers to the metric system and the Imperial figures follow in brackets. Wherever possible, a commonsense approach has been adopted and both sets of measurements have been worked out in round numbers. **BUT BEWARE!** This means that metric and the Imperial figures are *not* equivalent so make sure you only work with one or other set of figures.

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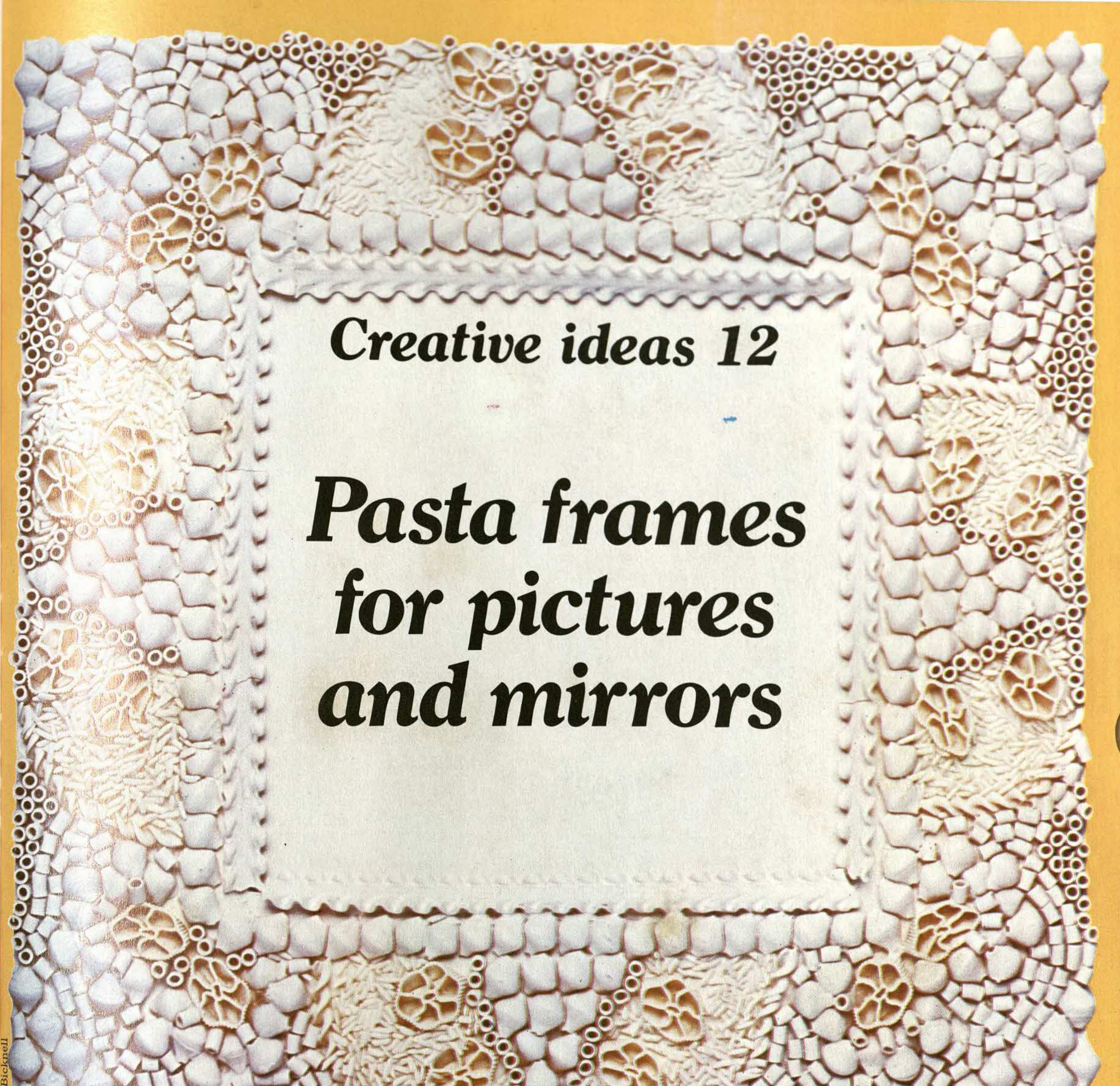
Creative ideas 12

Pasta frames for pictures and mirrors



Steve Bicknell

Pasta mirror frames
You can do more things with pasta than simply put tomato sauce on it! For example, lovely shapes can be turned into an exotic embellishment for a simple mirror frame.

To make the mirror frame shown here you will need:
Heavy mounting board 35.5 cm (14″) square, available from art supply shops.
Pasta in various shapes and sizes, such as shells and wheels. Rice, if desired.
Mirror 23cm (9″) square.
White glue such as Evo-stick resin 'W'.
Gloss spray paint or matt varnish.

Cutting the frame. Take a 35.5cm (14″) square mounting board and mark an inside square on the board by drawing a line 7.5cm (3″) from each edge. Cut out this square, taking care not to cut into border.

Now look at the pasta shapes and decide how best to arrange them on the frame. They may suggest a pattern or may look more effective just scattered at random.

Rice may be used to vary the texture and if, when completed, you decide against painting, the whiteness of the rice contrasts nicely with the honey colour of the pasta. But if you do decide not to paint you will have to be more careful with the glue and dirty finger marks.

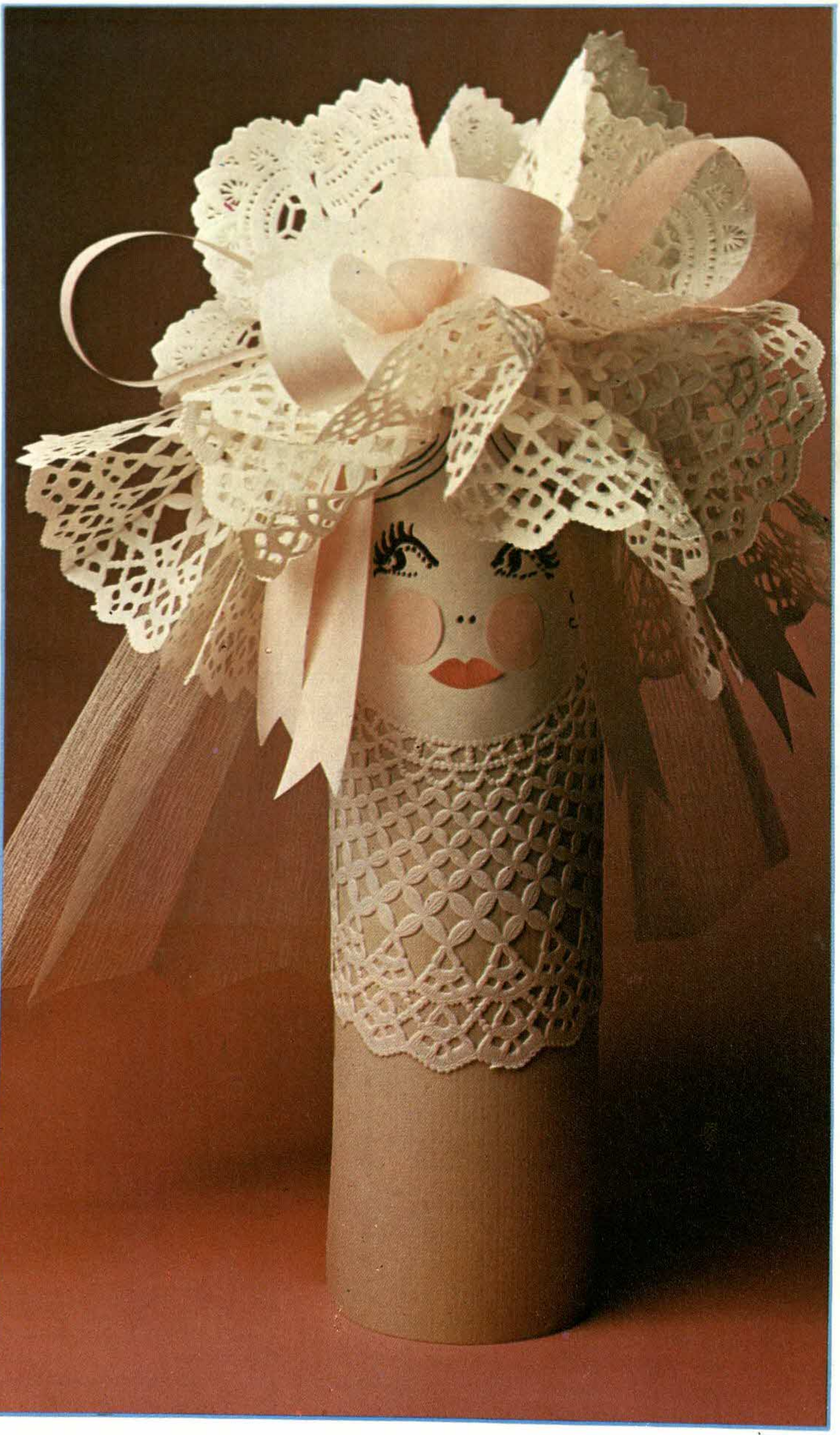
When using the pasta to make a pattern, complete one side first. You will then know how many pieces you will need for each side so that you can attain a balanced effect. Working in small areas, stick the pasta in place, applying the glue generously. Fill in one area before you move on to the next.

After the glue is thoroughly dry either spray paint it or apply clear polyurethane varnish.

When the paint or varnish is dry, glue the mirror to the back.

Use plate hangers to hang the mirror on the wall.

3-D decorations for parcels


Iain Reid

Any gift looks just that much more exciting when it's dressed up. Turn a tube into a centipede, a plain white cube into a woolly sheep or a grey package into an elephant. Or try out some of the following ideas.

Make a brown cylinder dachshund by adding paper ears, nose and feet; an oblong grandfather clock—write a message inside an added door with a few deft touches of a black felt-tipped pen; turn a very tall white box into a skyscraper block.

If you don't mind the recipient knowing what's inside the parcel, it's an amusing idea to reproduce it in paper on the outside of the packet—a gaudy flowered tie representing a more subdued one inside, for example or a book jacket disguising some paperbacks.

The main thing to remember is to keep parcel shapes as simple and basic as possible, adding decorations within those defined shapes.

Bride

You will need:

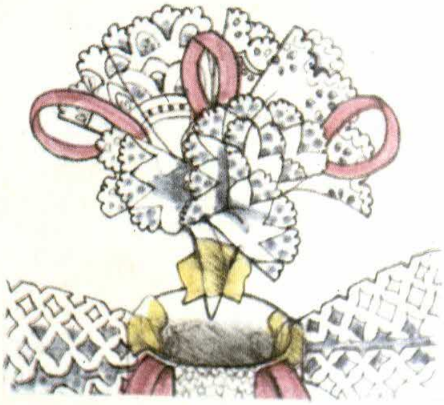
Cylindrical parcel.
Cream or white wrapping paper.
Piece of stiff white net.
Pale and dark pink paper.
Paper doilies.
Double-sided adhesive tape.
Black felt-tipped pen.
Paper glue.

☐ Wrap the cylinder with wrapping paper leaving an open overlap at one end of about 5cm (2"). Stick a doily round the cylinder, as in the photograph.

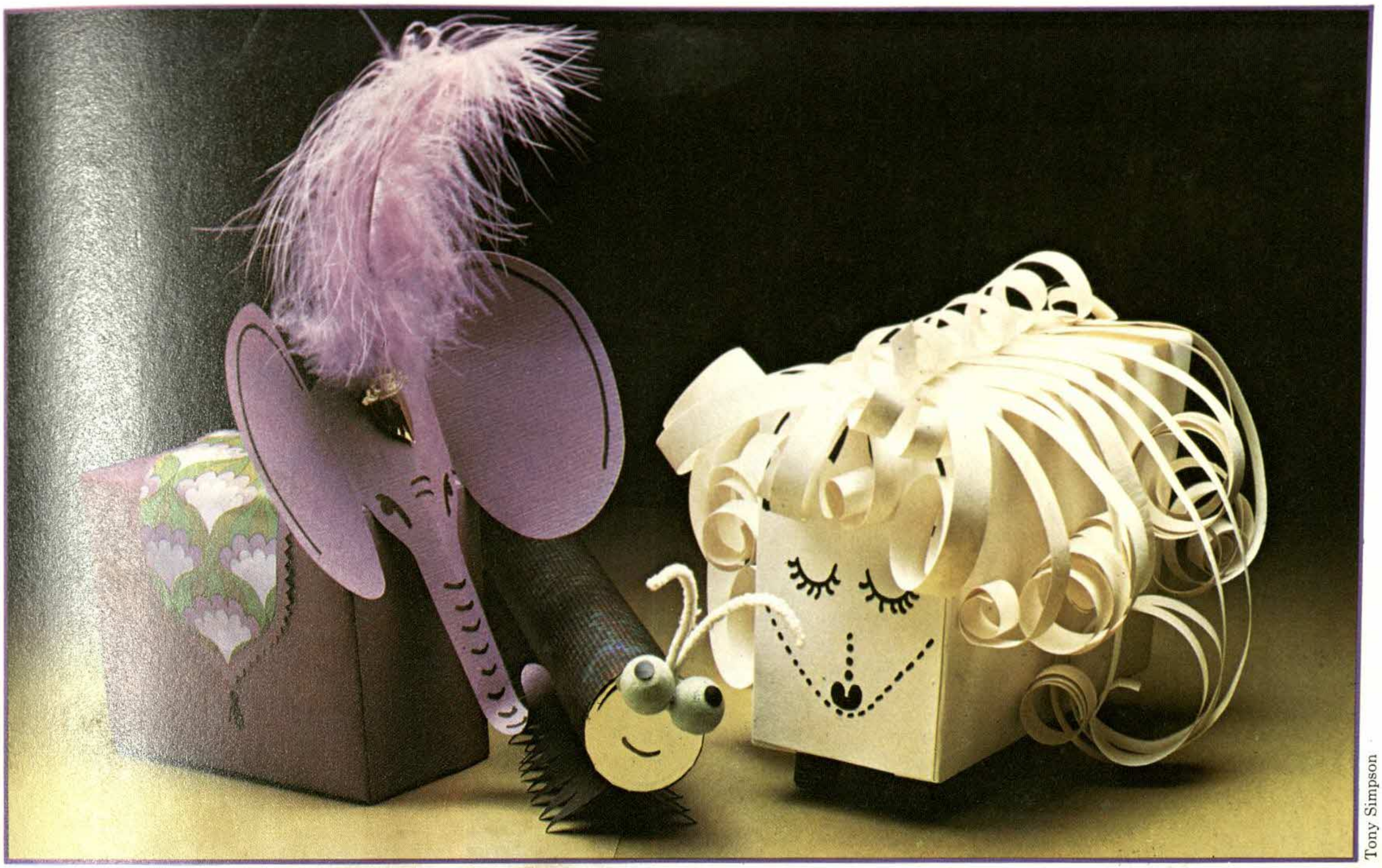
☐ Draw face and hair with felt-tipped pen. Cut out pink cheeks and mouth and glue in place.

☐ Pleat net and glue it to the back of the top of the cylinder.

☐ Inside the hollow at the top of the cylinder, tuck in folded doilies and loops of pink paper, sticking them in position with double-sided adhesive tape (fig.1).


1. *Tucking folded doilies in the cylinder.*

Here comes the bride, prettily decorating a cylindrical parcel in an original way — an amusing wedding gift idea.



Tony Simpson

Elephant, sheep and centipede. For centipede wrap a long tube in paper, add fringed paper feet, pipe cleaner antennae and two bulging eyes.

Elephant

You will need:
Oblong parcel.
Mauve cartridge paper.
Black felt-tipped pen.
Paper glue.
A feather.
Gold trimming.
Coloured paper, pinking shears.

☐ Wrap box in mauve cartridge paper.

☐ Cut the shape in fig.2. Bend as shown. Draw in elephant's face and outline ears in black felt-tipped pen. Add feather and gold trimming.

☐ Stick head to box with matching paper tab (fig.3).

☐ Add elephant's coat, trimming the shape of it with pinking shears.

Sheep

You will need:
Oblong parcel.
Black paper.
Thin white cartridge paper.
Black felt-tipped pen, paper glue.

☐ Wrap box in white paper. Draw sheep's face on front of box in black.

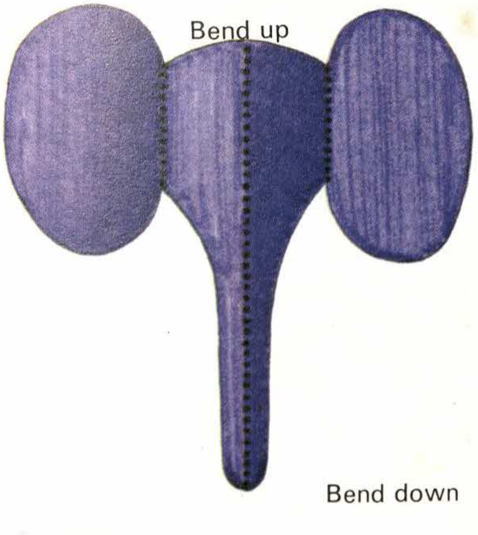
☐ To make ringlets, cut strips of paper about 1.5cm (½″) wide, and the length of the box.

Hold a strip of paper in one hand and, with the inside of the scissors blade behind the paper, gently scrape across the underside of the paper. Use the thumb which is on the scissors to guide the paper across (fig.4).

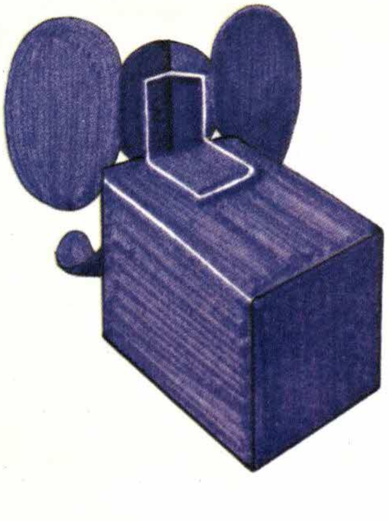
☐ Glue ringlets along the top of the box so they hang down the sides.

☐ For the top of the box, cut a long strip of paper, curl it and stick it down the length of the box. Add a few short curls to hang over the eyes.

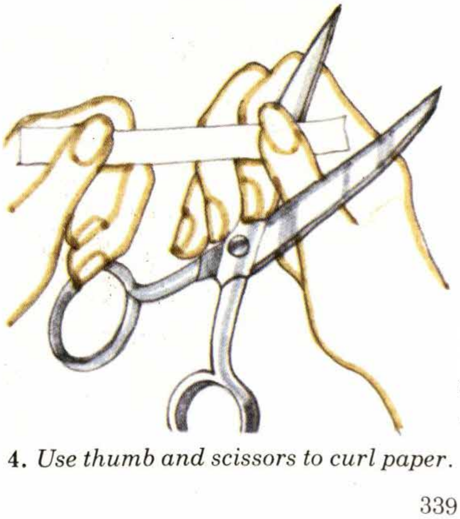
☐ The feet are 4 little strips of black paper wound into cylinders and stuck on each corner of the base of the box.



2. *Copy this shape for elephant's head.*



3. *Attaching elephant's head to parcel.*

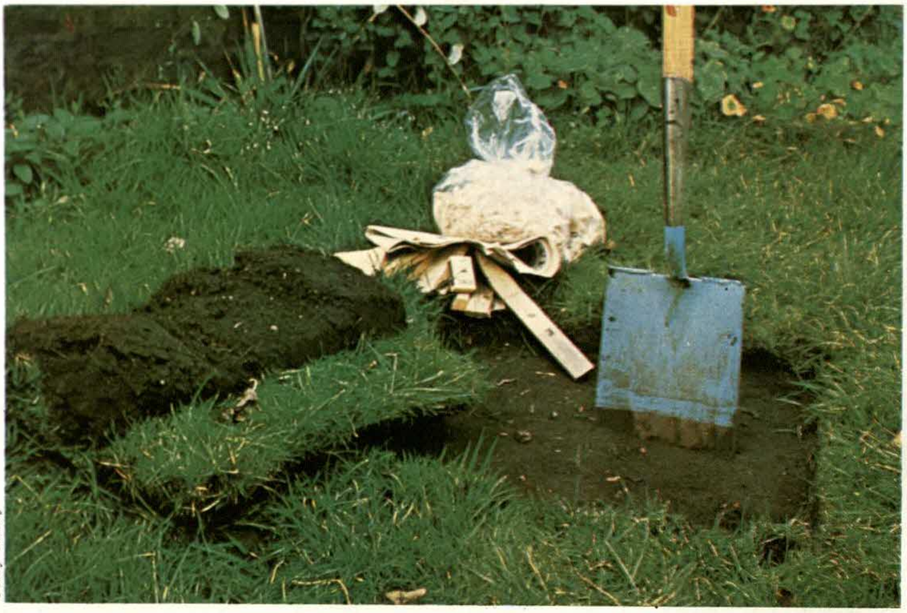


Joy Simpson

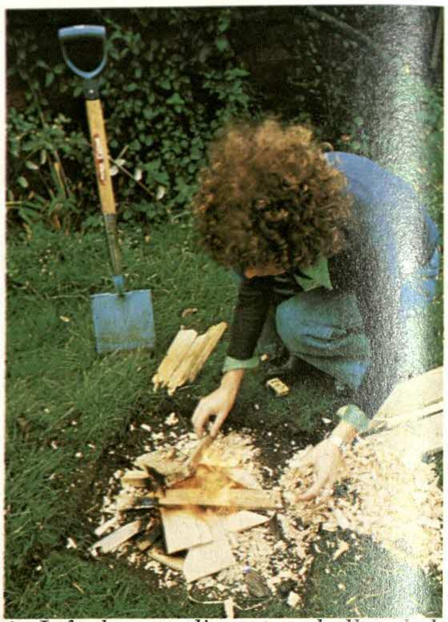
4. *Use thumb and scissors to curl paper.*

Firing pots in a bonfire

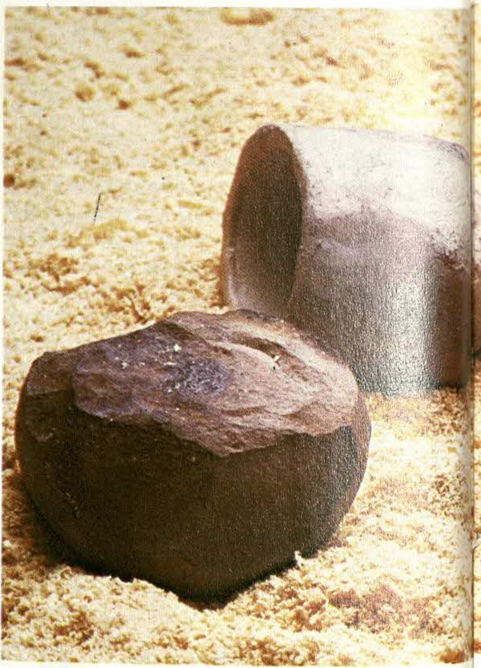
Clay 8



Jerry Tubby



1. *Left: how to dig out a shallow hole in the ground and (above) make a small, preliminary fire to dry the earth.*



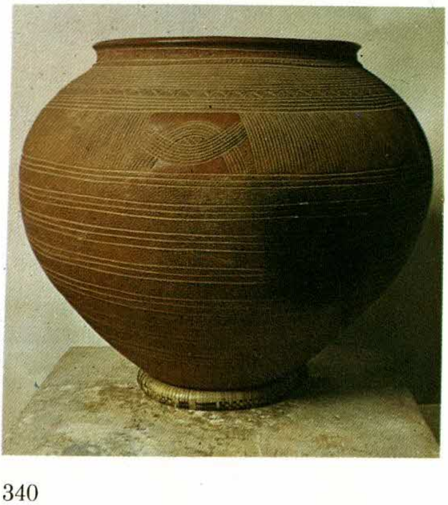
Johnnie Ryan

2. *If the ground is not dried properly*

A pot made from real clay must be baked in a fire or a kiln to harden it, or it will crumble and break when it is handled.

When the pot is heated to a certain critical temperature (the exact temperature depends on the kind of clay being used), chemical changes take place in the clay, causing it to become hard and durable.

Most modern potters use an electric, gas- or oil-fired kiln in their studios. These kilns can be heated to temperatures of 1280°C (2336°F), just above the temperature of stoneware glaze firing.



Nelson Hargreaves

A fine African bonfired pot. Lent by the West Surrey College of Art and Design.

However, primitive people in remote parts of the world such as Africa and South America do not have access to such sophisticated equipment. These people fire their pots in exactly the same way as Stone Age man fired his—in a bonfire.

Primitive bonfire kiln

If you do not yet have access to a kiln in a school or studio, it is worth using this primitive method to fire your first pots.

After the firing, the pots will have an attractive, earthy finish in red, ochre or black, depending on the type of firing and the clay you choose.

Preparing the clay

When you are preparing clay for a bonfiring, 10% of grog should be added to further strengthen it.

Grog. Grog is a commercially-prepared substance, available from potters' suppliers, that is widely used to strengthen clay for the firing process. It consists of clay which is kiln-fired and then ground down by machinery to give a coarse powder. Because it has been fired once, no further chemical changes can take place in it and it acts as a stabilizing influence in the main body of clay. The grog powder should be thoroughly worked into the clay during the kneading process.

Pinch pots fire well in a bonfire—they are solid and sturdy, without any seams that may come apart during firing, but any well-made pot that is not too fragile is quite suitable.

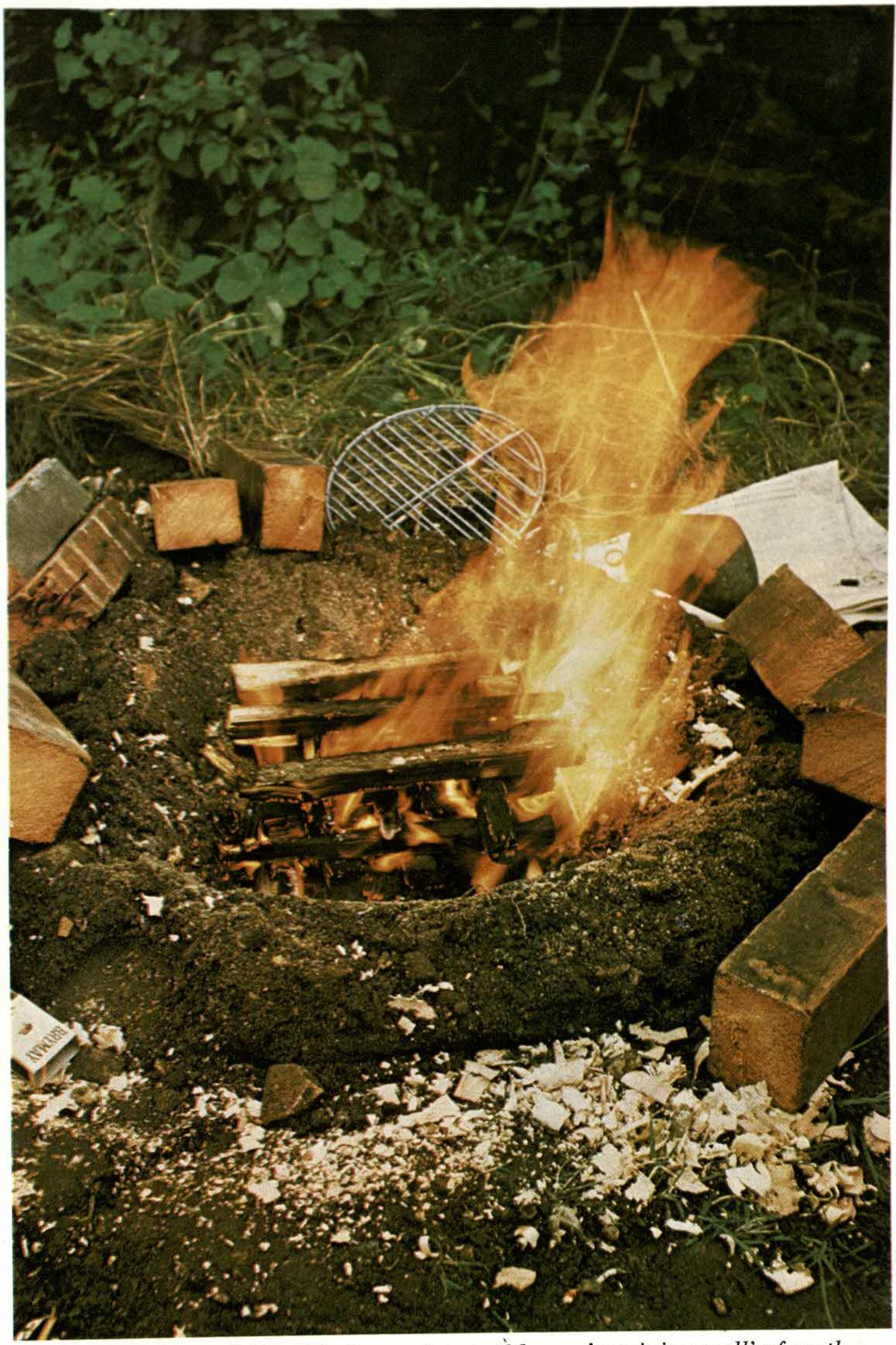
Make the pots well-rounded with thick rims, remembering that fragile pots do not stand such a good chance of surviving a primitive firing.

Drying out the pot

The completed pinch pots must be thoroughly dried out before firing.

3. *Charcoal is the best fuel to use as it gives a high, even heat but wood or coal can also be used.*

the pots may explode or crack.



Jerry Tubby

4. *It is helpful, especially with charcoal, to build up a 'retaining wall' of earth.*

Small pots take a few days to dry out in a warm, dry atmosphere; large ones take as long as two or three weeks. Check this drying process from time to time by colour and feel—dry clay is pale, and hard and brittle to the touch. It is very important that the clay should be completely dry, because damp pots exposed to fierce heat will crack. As a final test, stand the pot on a piece of glass and wait for condensation to appear. If the glass stays dry, the pot is ready to fire.

Choosing a bonfire site

A bonfiring has to be done on the right kind of day, so if you do not have a garden it is worth waiting for suitable weather and then making an expedition to the country. A still, warm day without damp in the air is ideal.

Ask permission if necessary, then choose a sheltered piece of level ground, well away from any dried undergrowth so that there is no risk of the fire spreading. The more sheltered the spot the better—wind will cause the fire to burn unevenly and smudge the pots with soot.

Building the bonfire

Dig out a shallow hole in the ground (fig.1) and start a small fire in it to dry it out—any dampness in the ground will cause the pots to crack (fig.2). Any available fuel can be used, but it must be dry.

Primitive people use dried sheep droppings or cow dung because they burn slowly and give a good, even heat. Coal, charcoal or wood can all be used, but a hardwood burns slower and hotter than a softwood, and charcoal gives the best, most even heat (figs. 3 and 4).

Stand the pots around this preliminary fire to get warm gradually. When the ground is dry, let the fire go out. Use pebbles, stones, bricks or the iron grid from a barbecue to form a base on top of the ashes for the pots to rest on.

Firing the pots

☐ Place the pots on top of the base; large ones separately, upside down on their rims; small ones of a similar size stacked together (fig.5).

☐ The pots can be covered with aluminium foil to protect them from the first surge of heat when the fire is lighted—when they may crack—but in the course of the firing the foil melts, and can be regarded as an optional addition to the process (fig.6).

☐ Build the fuel up around the pots so that they are completely covered (6a).

☐ Relight the fire all round the kiln so that it begins to burn evenly, and keep it burning evenly by screening it from draughts and wind.

A firing should take about ½–¾ hour for small pots, and 1½–2 hours for large ones. The temperature should reach about 700°C (1292°F). If necessary, stoke the fire repeatedly to keep it going well for the required amount of time.

Gently pull the fire apart with a pair of tongs, and check the colour. When the pots are fired satisfactorily, they should be a glowing, reddish colour (fig.7).

If the pots are not ready, cover them again, re-build up the fire on top and allow them more time. The longer the firing is continued, the more durable the pots will be.

When the firing is over, leave the pots in the fire to cool, then remove them with the tongs when the fire goes out (fig.7a).

Smoked firing

Pots can be coloured black by smudging them with soot during the firing. About half an hour before the firing is complete, smother the fire with sawdust, loose manure, leaves or grass. This causes the fire to smoke and deposit carbon on the surface of the pots, giving them a deep black surface.

Using bonfired pots

700°C (1292°F) is a low temperature for fired pottery. It is not hot enough for glazing, so bonfired pots cannot be waterproofed in this way.

They can, however, be varnished or another vessel can be placed inside to hold water in the case of vases or plant pots.

Plant pots in particular look very attractive in warm, red earthenware clay. They look individual and special, but they have the same brittle porosity as commercially manufactured pots.

Primitive people use bonfired pots for storing grain and water (the porosity of the pot keeps the water cool) and for cooking.

Your own bonfired pots could be used in the kitchen too—try pinching a square or rectangular shape for a butter dish. Place a glass dish inside to hold the butter, which will keep beautifully cool. If the pot is soaked with water, which is allowed to evaporate, it keeps food even cooler, rather like a primitive refrigerator. Try a small container for milk as an alternative project.

Small cooking vessels are also interesting to experiment with—round or oval dishes can be used to bake small quantities of meat or single fish, in the same way as commercial chicken bricks. The oil exuded from the food eventually soaks into the surface of the pot, making it impermeable.

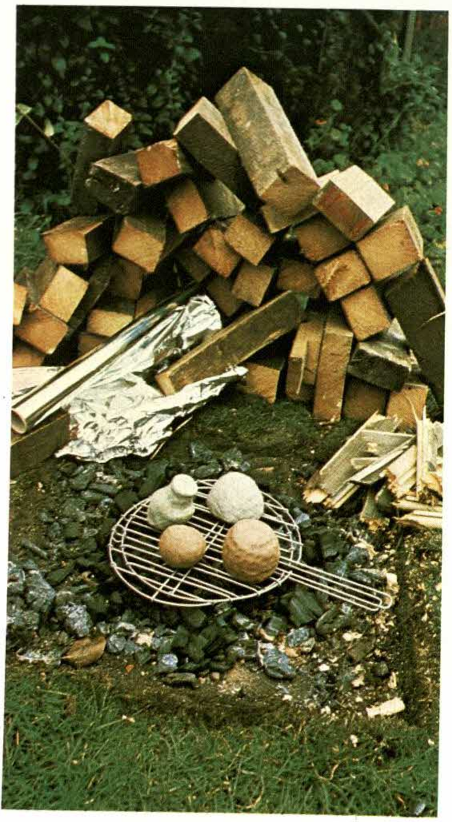
Experiment with pinch pot shapes to see what you can achieve, with the qualities of this particular firing in mind. Shallow, flat dishes are ideal for meat and fish; rounder, more enclosed shapes can be used for slow cooking of beans or lentils.

Other items made in clay can, of course, also be bonfire fired. Bird and animal models, as long as the inside is hollowed out, are suitable, as are slabs and tiles.

Take care when loading your 'kiln' that models are not in a position where they are likely to be crushed by the weight of the fuel, and that flat articles are weighted down evenly so that they will not warp.

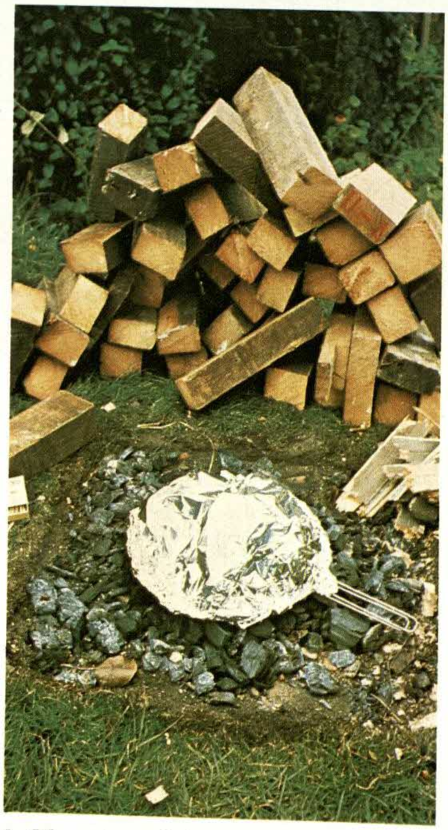
Decorating bonfired pots

Bonfired pots can be decorated in a variety of attractive ways, and the next Clay chapter deals with these techniques.

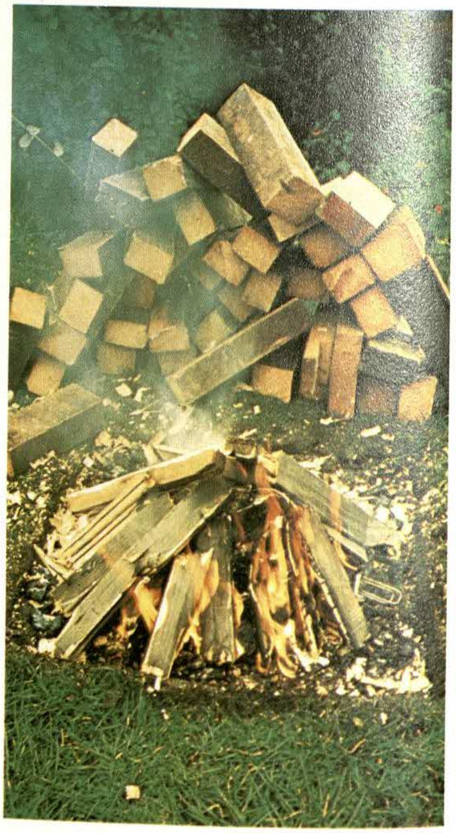


Jerry Tubby

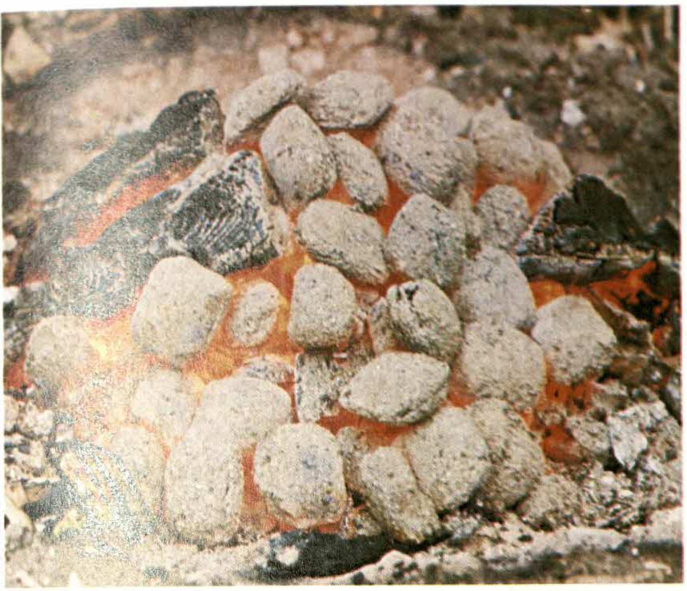
5. *Pots are shown on a barbecue grid, on the embers of the first fire.*



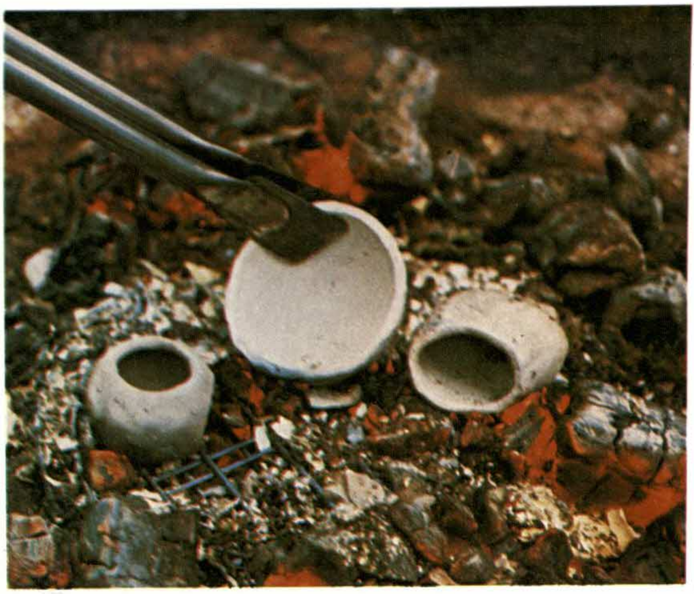
6. *The pots and the grid can be wrapped up with aluminium foil.*



6a. *Wood is stacked all round the foil-covered pots and the fire re-lit.*


Jerry Tubby

If charcoal is used, the pots must be entirely covered.



7a. *The pots are removed from the embers when cool.*

7. *Use tongs to check colour of pots.*

Pots should be left to cool down thoroughly before handling.

Johnnie Ryan

These three very simple pots were satisfactorily fired in a bonfire kiln.

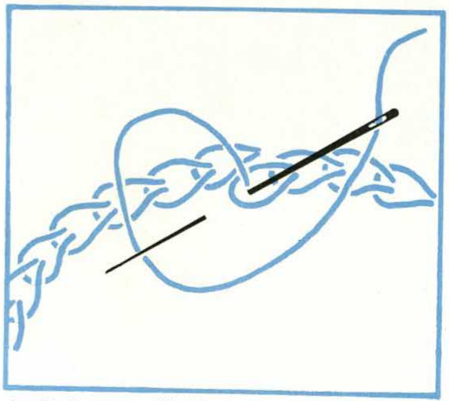
Chain stitch as filling stitch

Yarn — embroidery 4

When using chain stitch as a filling stitch it is easiest to start off with shapes which are fairly round. With these shapes it is easier to work round and round and keep the lines of stitches close together. Once you have completed a few such shapes you will be able to tackle irregular ones.

When working a design which is filled in with closely packed stitches choose a medium-weight dress or furnishing fabric which is comparable to the weight of the stitching. Also choose a colour and/or texture which is suited to the design.

When filling in a shape, work the stitches around the outline of the shape, then, as you return to the starting point, bring the needle point just inside the first round of stitches so that the start of the second round is hardly visible when the work is completed (fig.1). Keep working round and round, completely covering the background, until the centre is reached, then bring the needle over the last loop and draw the yarn through to the back. Fasten off.



1. *Bring needle through just inside the first line of embroidery.*

Filled chain stitch can be made to look almost three-dimensional if you start along the outline with larger chain stitches and gradually make them smaller and smaller as you progress towards the centre.

However, if you want the surface of the fabric to be completely covered with embroidery it will be necessary to fill in the centre of the outer chain stitches with detached chain stitches.

Yarn. To use chain stitch as a filling stitch it is important to select a yarn of proportionate thickness to the size of the stitch, which is why 6-stranded cotton is most appropriate. So before you start the embroidery, work a few stitches to find out how many strands you need to achieve a stitch size which is completely filled in with the yarn.

Pressing and stretching

When stitches are worked very close together the fabric sometimes becomes puckered because it is stretched more in one place than another by the concentration of stitches.

All embroidery should be pressed on the wrong side with a warm iron to give it a finished appearance, but if the fabric is distorted it must be pressed and stretched to make it smooth.

To press embroidery. Pad a large flat surface with a blanket and ironing cloth or use a well-padded ironing board. Place the fabric on the ironing cloth, wrong side uppermost, and press with a damp cloth.

To stretch the fabric. Pad a board with clean, damp blotting paper or, if blotting paper is not available, lay the fabric over several thicknesses of damp, white cotton fabric. Place the fabric on the blotting paper, right side uppermost. Fix one edge of the fabric to the board with drawing pins, aligning the horizontal strands with the edge of the board. Repeat on the opposite edge and at the sides, aligning the vertical strands with the edge of the board.

If the sides of the board are not at right angles, use graph paper or lined blotting paper to obtain accurate stretching. If using graph paper place it under the blotting paper.

Leave to dry for at least 24 hours.

To work the iris design

The contrast between the nubbly, dull linen background and the lustrous stranded cotton makes the textural effect more exciting. Note, too, how the narrow spacing between the random, horizontal lines integrates the background cloth with the embroidery; without these lines the embroidery would appear superimposed.

You will need:

The design enlarged to 17cm x 21.5cm (6¾"x8½") (see Design know-how chapter 4, page 112).

A piece of natural coloured linen-look fabric, 25.5cm x 27cm (10"x"10½").

Stranded cotton; for flowers, 2 skeins of peacock blue and 2 skeins of natural; for leaves, 1 skein dark grey, 1 skein chestnut; for horizontal background lines, 1 skein beige; for buds, 1 skein cinnamon.

1 crewel needle.

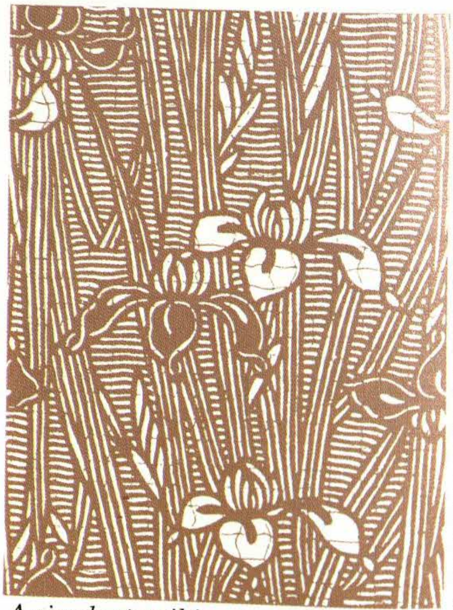
The stitches are all worked with two strands of the stranded cotton. While working it is important to remove any kinks from the strands so that they lie side by side to give a smooth appearance.

To use the design as a picture. Fray the top and bottom edges of the fabric and oversew very neatly to prevent further fraying. The sides may be either frayed and oversewn or turned under and hemmed. Mount the fabric on a coloured cardboard background, leaving about a 2.5cm (1") border all round and set in a picture frame.

To use the design as a cushion. Centre the design in a piece of cloth about 32cm x 40cm (13"x16") and make up into a cushion 30cm x 38cm (12"x15").

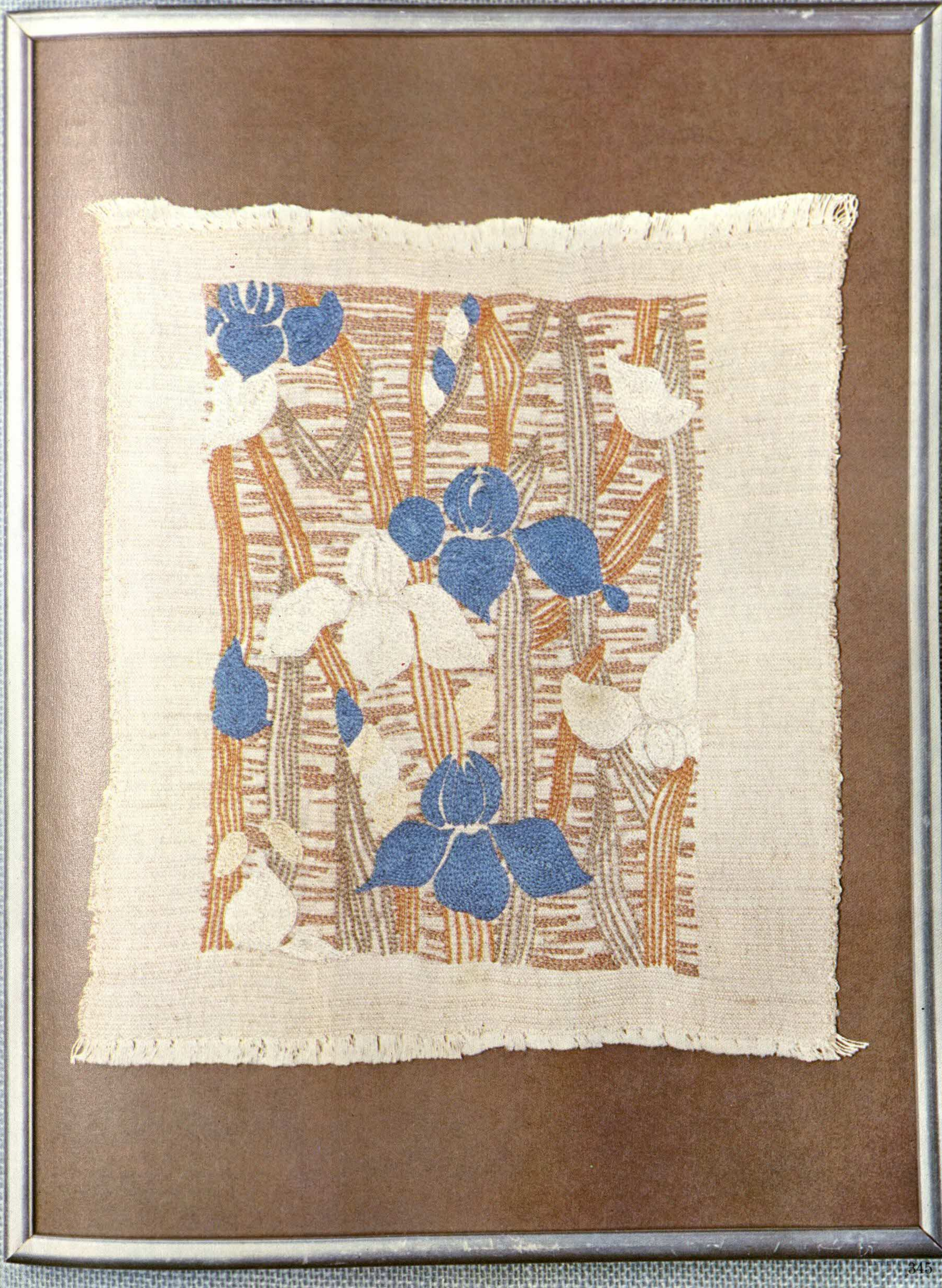
To use the design on a dress. Work the design directly on to the front of a plain woollen dress.

Right: this beautiful piece of embroidery is made up entirely of very small chain stitches, some worked round and round to make up the iris flowers and buds, others in lines to represent the leaves and the background. Yarn: Anchor Stranded Cotton. Designed by Shifrah Fram.



A simple stencil inspired this piece of embroidery but it could be interpreted in many different ways.

Design from Japanese Stencil Designs, Dover Publications Inc. New York.



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Starting to weave with a loom

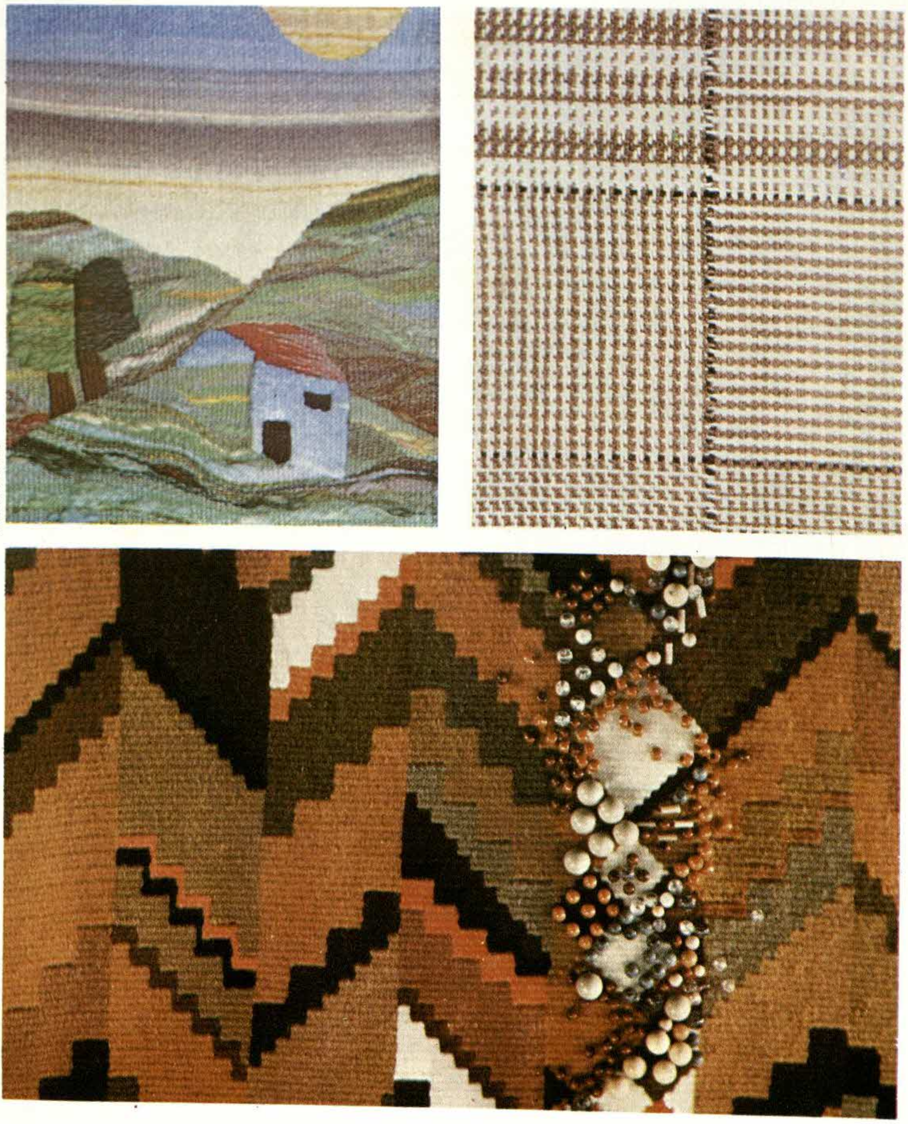
Yarn — weaving 4

The first three weaving chapters showed simple ways of using yarn—how to make plaits with multiple strands and how to weave around a rigid structure with the God's Eyes. To move into weaving 'proper' is not the daunting step that many people believe. Weaving is quite simply the interlacing of two sets of threads, usually at right angles to one another.

Most people have done some simple weaving at some time—like darning a hole in a sock. This involves setting up a set of threads in one direction (the warp) and darning another thread (the weft) over and under the warp threads, backwards and forwards, until the darn is completed (fig.1). A new piece of cloth has been made and this process is the basis of all weaving.

Usually in darning a sock it is helpful to stretch the warp threads over a 'mushroom' as it is much easier to work if the threads are under tension. A loom is a device which keeps warp threads in tension so that they are easy to weave.

Aspects of weaving: pictorial tapestry by Angela Goess; colour and weave by Diane Stolk, Central School; detail of beads in a tapestry by Candace Bahouth.



Chris Lewis

Many people are discouraged from weaving as a craft by the idea that a loom is necessarily a piece of equipment about the size and price of a four-poster bed and needing a special room to house it. Such looms are used by some weavers, of course, but many of the world's top weavers do not use anything more complicated than a picture frame.

Looms

Traditional looms. Since the very first piece of weaving was made, many ways have been found of holding the threads in tension. Threads were hung from branches and weighted with stones (fig.2) or stretched between the two ends of a pliable stick (fig.3). The primitive back-strap loom was used to great effect by the pre-Columbian Indians of Peru. Here the tension of the warp threads is achieved by moving the body backwards against the strap (fig.4).

Improvised looms. There are many items around the house which will serve as temporary looms for early experiments. Anything with a pair of parallel bars can be used including such everyday objects as a clothes horse (fig.5), landing rails (fig.6), an embroidery slate frame (fig.7) or even the legs of an upturned chair.

The warp threads

The next chapter on weaving deals more fully with materials, but a general rule in choosing a yarn for the warp threads (or 'ends') is that it must be strong but not fluffy or too elastic. Weft threads (or 'picks') can be almost anything as they do not have to take the strains and stresses of the warp threads.

Spacing the warp threads. When putting a warp on to these simple looms the threads should be spaced very carefully and evenly. A rule of thumb guide is to be able to see more thread than space in between the threads, judged over the area where the weaving is to take place (fig.8).

To keep the threads evenly spaced, a narrow strip of corrugated cardboard can be taped to the top and bottom edges of the frame. If a thick yarn is being used, one warp thread per groove may be enough, or several thinner threads can occupy one groove.

Even tension

The warp threads on the simple loom are created by winding a continuous thread around the loom, knotting the thread securely to the frame at beginning and end. When winding the warp threads around the loom, it is helpful to wind in a figure of eight.

Do not let any of the warp threads cross over another thread. Try also to keep all the threads at the same tension—comfortably taut.

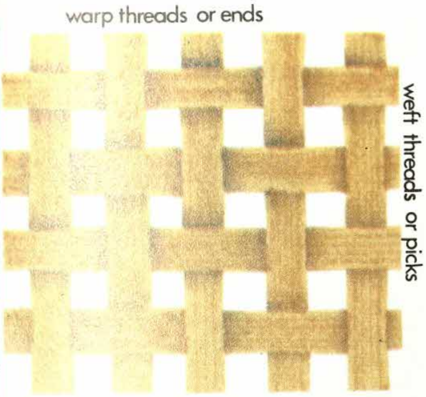
To test them before weaving, close your eyes (this helps to concentrate the sense of touch) and pat your hand across the warp from one side to the other. Tighten up those threads which are slack by moving the yarn around the loom or by padding with wads of paper between the threads and the frame.

Almost all weaving needs an evenly-tensioned warp. Areas which are slacker than the rest of the warp will show in the weaving (fig.9).

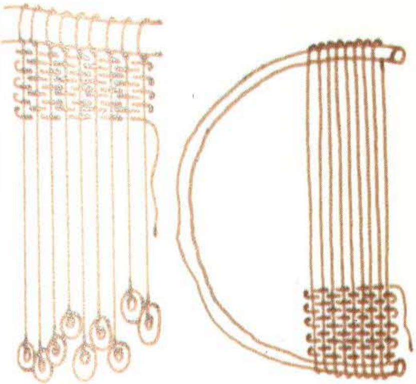
Starting to weave

On more elaborate looms, there will be mechanical help in lifting every other thread, but on simple looms the weft can be put through with a large packing or carpet needle (fig.10). If a large piece is being woven, then a stick shuttle is useful (fig.11). This holds long lengths of weft yarn as well as acting as a needle for darning in and out of the threads.

Placing the weft. Start the weft, darning across from one side leaving an 8cm (3″) tail hanging. This is woven in for about 2.5cm (1″) when the weft is taken from that side next time. Do not pull the weft tightly when it reaches the other side of the warp or the fabric will curve in at the edges where the threads may eventually break under the strain. Try to get into the habit of gently pulling the weft snugly against the selvedge threads before beating into place.



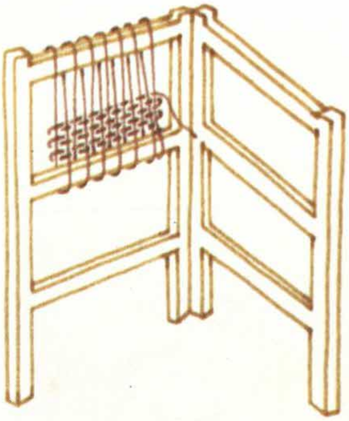
1. *Interlacement of threads in weaving.*



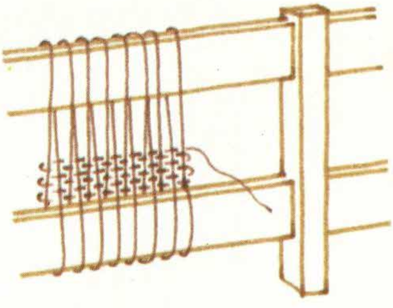
2,3. *Traditional 'looms'. Using stones to weight the warp threads and a pliable branch.*

Courtesy of the Trustees of the British Museum

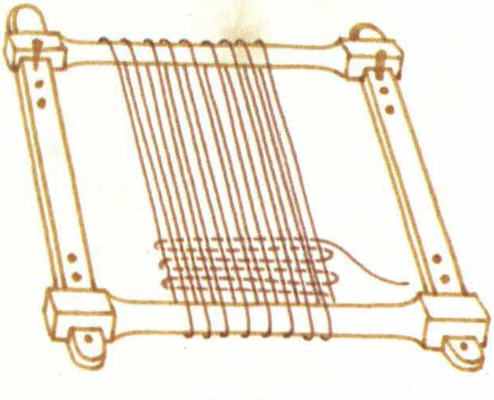
4. *Detail of decorated Mochica vase from Peru showing one of the oldest forms of loom — the back-strap.*



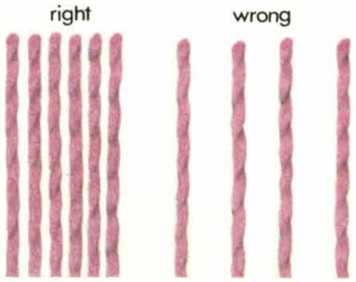
5. *Clothes horse in use as an improvised loom.*



6. *Landing rails.*

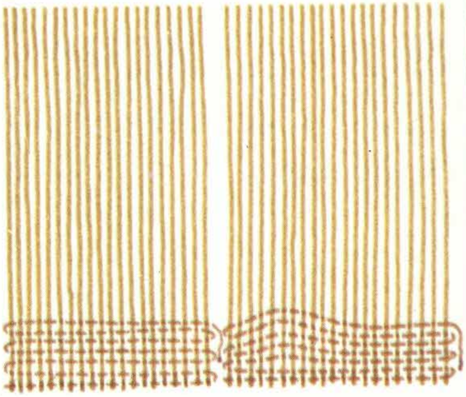


7. *Embroidery slate frame.*

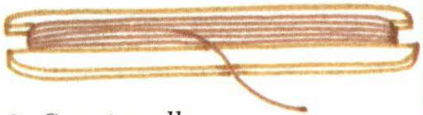


Victoria Drew

8. *Spacing the warp threads.*



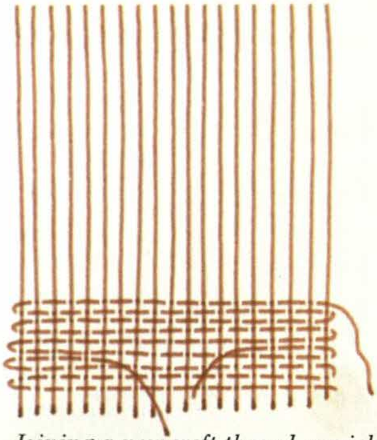
9. *Slack warp threads will result in uneven tension.*



10. *Carpet needle.*
11. *Stick shuttle.*

Beating. The weft thread has to be pressed gently but firmly into place and a table fork or coarse hair comb can sometimes be helpful.

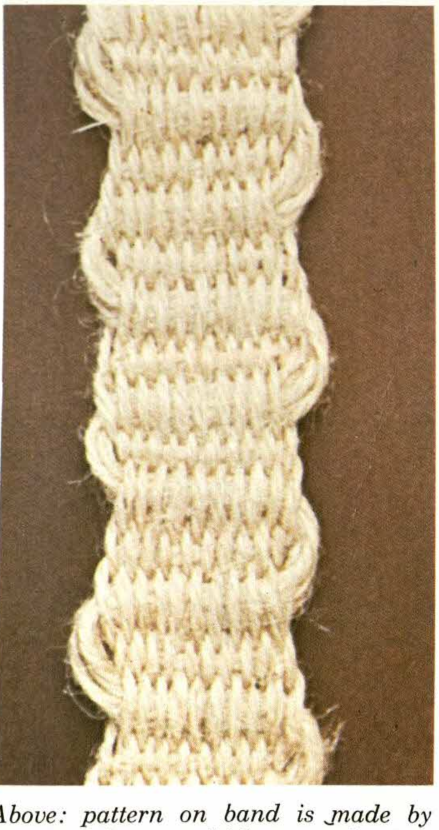
Joining a weft thread. To join on a new length of weft thread, either start at the edge (as the first weft pick was started) or overlap with the new thread for about 4cm (1½″). When changing colour it is usually (fig.12) better to start at the edge. Avoid knots anywhere in both warp and weft.



12. *Joining a new weft thread or pick.*

To make a band

Decorative band for hat or belt, 3cm (1¼″) wide.



Johnnie Ryan

Above: pattern on band is made by weaving alternate thicknesses of twine.

Right: woven shoulder bag with its 'loom'—a hard-backed book.

You will need:

One ball of 3-ply jute garden twine for both warp and weft. Twine is sold in 450gm (1lb) balls but for this length of band 113gm (¼lb) is ample.

Carpet needle with large eye.

Any of the improvised looms mentioned above which allows the warp to be 30cm (12″) longer than the length of the band. The example was woven between two table legs.

☐ Tie one end of 3-ply jute to the lower bar of the loom. Wind the warp in a figure of eight up around the top bar of the loom and back again around the lower bar until you have 19 warp threads. If a wider band is required, increase the number of threads to any odd number.

It is important to remember that the warp should be at least 30cm (12″) longer than the length of the finished article.

☐ Using the carpet needle, start to weave with one strand of 3-ply jute about 90cm (3′) long. Lifting up every other warp thread with the needle, draw the weft through.

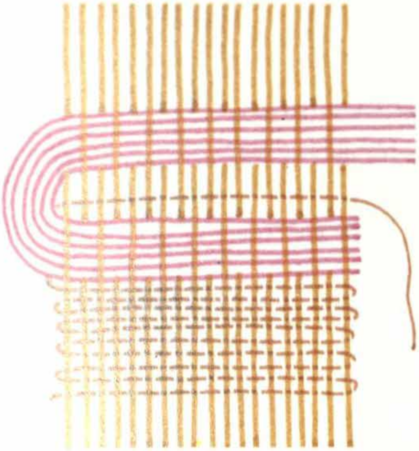
The opening provided by the figure of eight winding will help in the weaving of every other weft.

☐ Beat the weft firmly into position.

☐ When you have woven about 10 rows of the one strand, leave the strand hanging at the end of a row.

☐ Take 6 long strands of jute and thread through the needle. Weave one row leaving the ends of the 6 strands

Steve Bicknell



13. *Weaving the band.*

in a tuft as they will be too thick to weave in.

☐ Beat the 6 strands firmly into position.

☐ Leave the 6 strands hanging at the end of the one row of weaving and pick up the one strand.

☐ Weave one row with the one strand.

☐ Pick up the 6-strand group and weave it back for one row (fig.13).

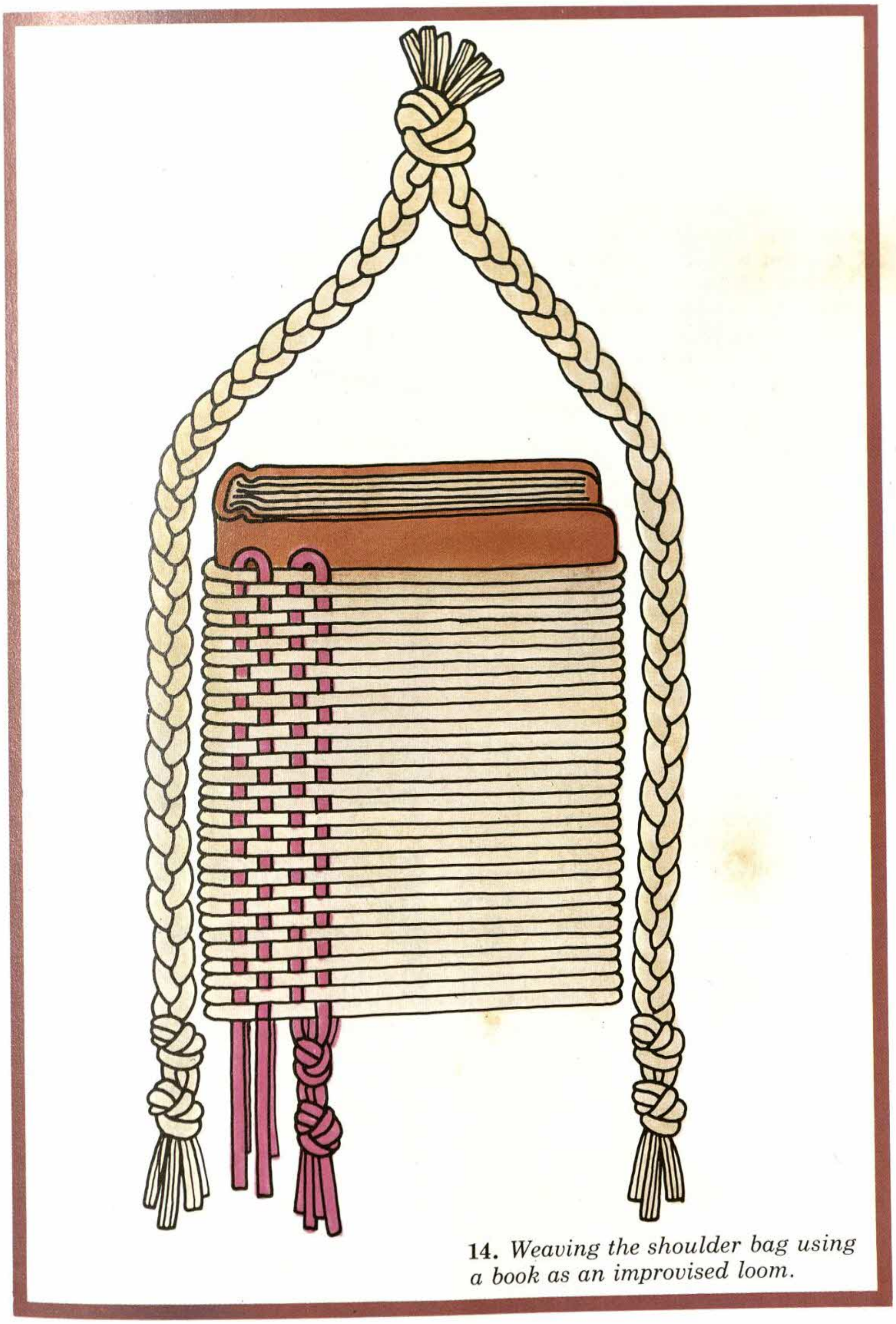
☐ Weave alternate lengths of the one-strand and the 6-strand group to produce the patterned effect.

☐ Finish the band with 10 rows of one-strand weaving so that the band will be firm when taken off the loom.

☐ Weave in the end thread as you did the first thread.

☐ When you have finished the band, cut the warp threads at each end of the band near to the loom bars.

☐ Trim the fringe to the required length. If your weaving has been even, the band should remain firm even with a short stubbly fringe at both ends.



14. *Weaving the shoulder bag using a book as an improvised loom.*

To make the shoulder bag

A 23cm x 20cm (9″x8″) bag with a 52cm (20″) braided shoulder strap.

You will need:

225gm (½lb) weight of thrums (short lengths) of carpet wool which can be purchased from any carpet factory. Thrums come in irregular lengths and are often 3½m-5½m (12′-18′) long. You will need one long length for the warp and shorter lengths for the weft.

Hard-backed book. The one used for the example was 25cm x 20cm (10″x8″).

Carpet needle.

33m (36yd) of yarn for strap.

☐ Wind the warp right around the book, knotting the two ends firmly to their adjacent threads.

☐ Start off each weft thread by leaving a tail of 30cm-35cm (12″-14″) at the bottom of the book. Weave up to the top of the book and back down again, leaving another tail at the bottom (fig.14).

☐ Weave right around the book, including the spine and the paper edge, although these areas will be covered by the plait handles. An occasional weft pick of coloured yarn is very effective.

☐ When the weaving is complete, slide the book out and join the bag up at the bottom by knotting each pair of weft ends with the pair woven on the other side.

To make the shoulder strap. Cut eighteen 1.8m (2yd) lengths of yarn. Make two 3-strand plaits each with 9 strands as shown in Weaving chapter 1, page 11, and finish with one of the knotting methods in Weaving chapter 3, page 66.

☐ Stitch the knotted plaits to the side of the bag.

Experimenting

Simple or improvised looms, with no mechanism for lifting alternate warp threads or for beating the weft into place, appeal to experienced weavers because on them anything is possible. Experimenting with different weaves (not always going over one, under one) and beating the weft yarn at angles other than right angles is easier with improvised looms than when more complicated looms are used.

A limitation of these simple looms is that they do not have any means of storing long warps, therefore the length of the piece of weaving is determined by the size of the loom. With a more elaborate loom, it is usually possible to roll a long warp on to a roller to be released as needed.

More hand stitched methods

Appliqué chapter 1, page 320, dealt with methods of applying motifs by hand, using felt and non-fraying woven fabrics, simple pattern making and sources for pattern inspiration. Some trace patterns for simple motifs were given, plus ideas for using them.

This chapter covers preparing a more complicated design and methods of hand stitching fabrics which fray. (The methods are also suitable for non-fraying fabrics.)

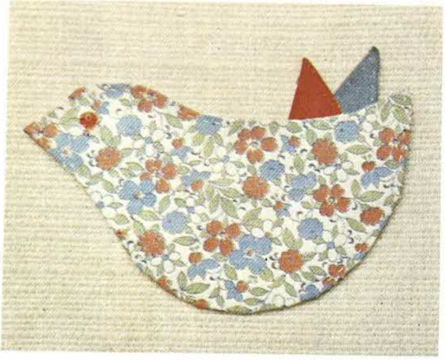
Preparing a design

You will need to work from a paper pattern unless you are sufficiently confident to cut out motifs directly from the fabric.

Make a full-scale drawing of the design on paper, marking in the various sections which are to be cut from different fabrics and noting where sections are to overlap. Ears, wings or paws, for instance, can be cut out separately and positioned with one edge under the main part of the motif, which makes sewing easier by avoiding difficult angles.

Trace the outlines of each section separately on to another piece of paper and cut them out to use as patterns.

Outline the complete design lightly in pencil on the background fabric or use dressmaker's carbon paper or a transfer pencil.



Roger Phillips

Bird motif first tacked on to interfacing with wings cut out separately and tacked under main motif.

Another method is to draw the design on tissue paper, pin this to the background fabric, tack around the design lines, then tear away the paper.

Fabrics which fray

It is not difficult to apply motifs cut in fabrics which fray if a little extra time and trouble is taken in working with one of the methods described here.

Stitch and cut. This is a good method to use on thin fabrics. Cut out a larger area than required and mark in the shape of the motif with a pencil. Tack motif to background fabric and work close blanket (simple buttonhole) stitch through both thicknesses around this outline (fig.1). Then carefully cut away the surplus motif fabric.

Interfaced method. Another method of dealing with fraying or flimsy fabrics is to reinforce them with iron-on, non-woven interfacing before cutting out the exact shape of the motif. This will provide a firm edge on which to work. The motif can then be tacked and closely blanket stitched to the background fabric.

Alternatively, cut out the exact shape in the interfacing. Iron it on to a larger piece of the motif fabric, cut out with seam allowance and apply as for turned under method.

Turned under method. Motifs cut from most woven fabrics can have their edges turned under before they are applied. Here are some techniques to help you achieve good results.

Closely woven cotton fabrics are the easiest to handle. Remnants of other dressmaking fabrics can also be used, but when selecting patterns bear in mind the purpose for which the design is intended and never add a non-washable fabric to a washable article. Careful cutting and placing ensures that the appliquéd design will lie flat. Find the straight of grain before cutting each section (Sewing chapter 1, page 15) if there is no selvedge to guide you. Match the straight of grain of the applied fabric to the straight of grain of the background, except for small curved motifs which can be cut on the cross.

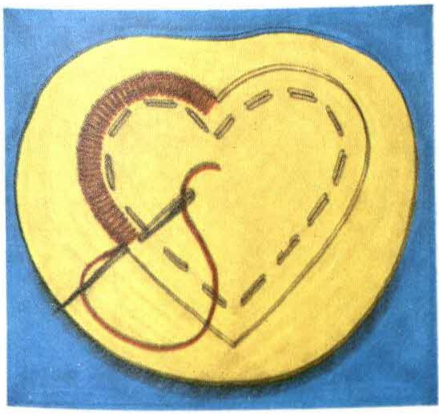
Cut out each piece of the motif, adding a hem allowance of 6mm ($\frac{1}{4}$") all round each section. Turn in and tack down all raw edges except those which adjoin other parts of the motif, ie the pinafore and bonnet edges on the Polly Pinafore motif on the cushion. One edge (the pinafore edge) is left without its hem allowance turned in and the other has its allowance turned in.

The edges of the Polly Pinafore motif on this cushion are turned under and then slip stitched into place.

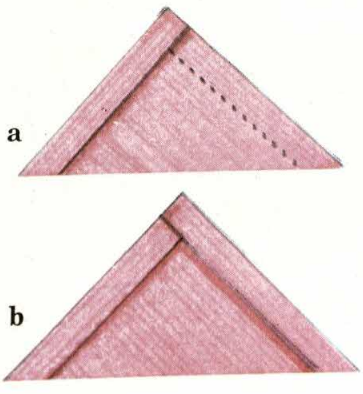
If the shape is curved make snips in the hem allowance at frequent intervals, just less than 6mm ($\frac{1}{4}$") deep, then turn in the edges. The snips will overlap on a convex curve and open out on a concave one.

To mitre a right-angled, or wider, corner, first fold in one edge (fig.2a), then fold over the other (fig.2b) and tack. To mitre a sharper point, first fold in the point (fig.3a), fold one side over this (fig.3b), then the other (fig.3c) and tack to secure.

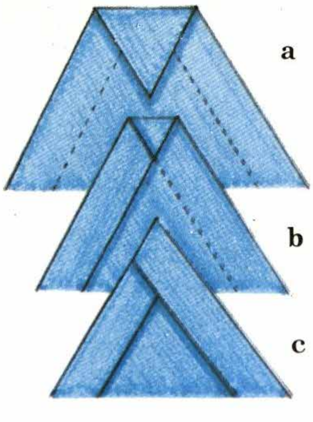
Jerry Tubby



1. *Buttonhole stitching a motif to background before cutting away surplus.*



2. *Mitring a right-angled corner.*



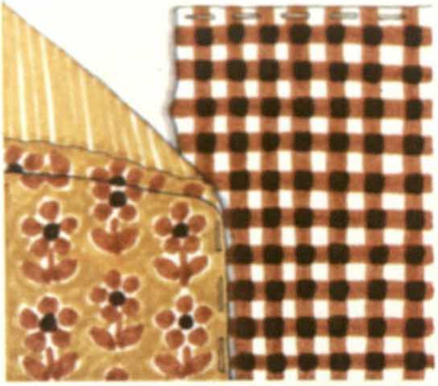
3. *Mitring a corner of less than 90°.*

Joy Simpson

The edges can be pressed lightly before applying but take care to press only the edge so that the turnings do not mark the right side.

Alternatively tack the shape to the paper pattern and then press the whole piece (the paper will prevent the turnings from marking the right side). Remove tacking and paper.

Position the motif on to the background fabric so that adjoining sections have the edge with hem allowance turned in placed over the one left raw (fig.4). Tack, and stitch the motif neatly in place with small slip stitches (Sewing chapter 3, page 96) in a matching thread, or with neat running stitches worked in matching or contrasting thread.

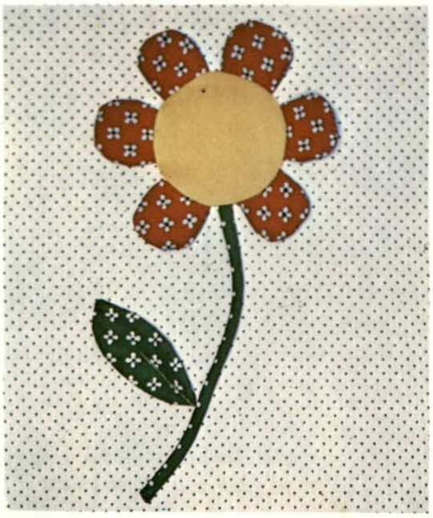


4. *Turned in edge placed over raw one.*

Adjoining edges can be stitched to the background in one operation.

Flowers in relief

A pretty variation of appliqué can be achieved by leaving the edges of motifs unattached to the background. Flower petals can be attached at the bottom only. Cover the stitches with a separate flower centre slip stitched in place. Edges can be either closely blanket stitched or the petals can be cut double, the edges stitched with right sides together, then turned to the outside through a small opening which is then stitched up. The second method takes a little longer to work, but results are sufficiently sturdy to be used on children's garments.

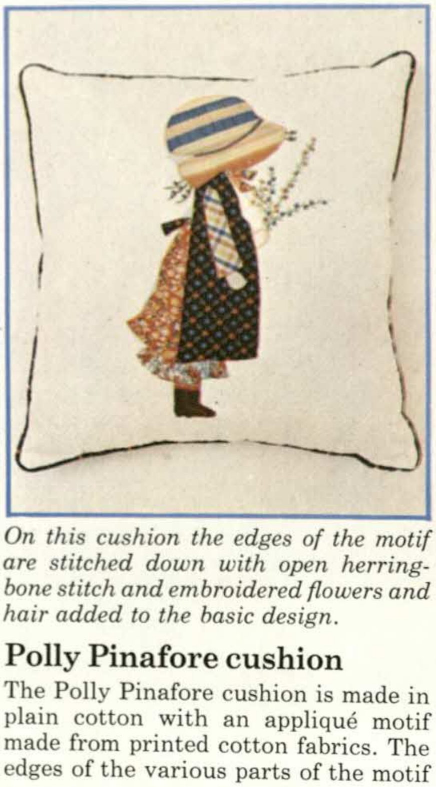


Peter Heinz

Flower and leaf with edges unattached.

Leaves can be made in the same way, but stitch these in position with a stem stitched spine, to about two-thirds of the length of the leaf.

The petticoat frill of Polly Pinafore is attached in a similar way. In this case the frill is cut slightly wider than the bottom of the skirt and pinafore, and a small hem made on one long and the two short sides of the frill. The fourth side is then gathered and this edge is covered by the skirt and pinafore.

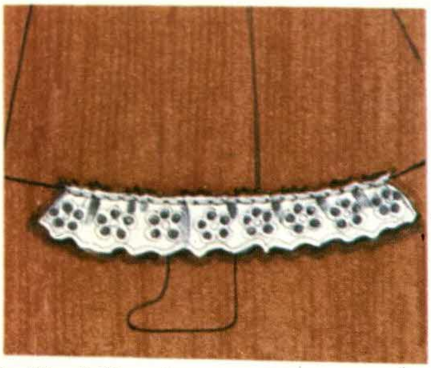


100 Idées de Marie Claire/Godeaux

On this cushion the edges of the motif are stitched down with open herringbone stitch and embroidered flowers and hair added to the basic design.

Polly Pinafore cushion

The Polly Pinafore cushion is made in plain cotton with an appliqué motif made from printed cotton fabrics. The edges of the various parts of the motif are turned under and slip stitched into place. The finished cushion is 48cm (19") square and the motif is 41cm (16") high but the motif could be made to fit a cushion of any size.



6. *The frill gathered and back stitched in position.*

You will need

For the cushion: 1.15m (1¼yd) of 90cm (36") wide plain cotton fabric.

Cushion pad, 51cm (20") square.

For the appliqué: bonnet and petticoat frill—20cm x 28cm (8"x11") piece of broderie Anglaise; pinafore—26cm x 18cm (10"x7") cotton fabric; dress—20cm x 10cm (8"x4") piece of cotton fabric; scraps of cotton fabric for ribbons, hands, basket, sleeve, boot.

To make the cushion. Cut two pieces of plain fabric 51cm (20") square and put one aside for the cushion back.

☐ Take the remaining square of fabric (the cushion front) and find the centre of the square (see Appliqué chapter 1, page 320).

☐ Enlarge the motif (fig.5), make paper patterns and outline the design centrally on the cushion front as described in this chapter.

☐ Cut out the various parts of motif (except the petticoat frill) in appropriate fabrics, allowing 6mm (¼") all round each piece for the hems.

☐ Cut a piece of broderie Anglaise for the petticoat frill, 28cm (11") x 4cm (1⅝").

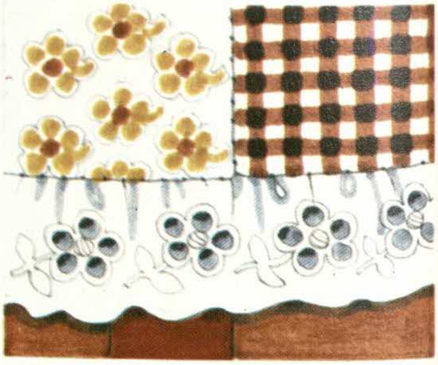
☐ Narrowly hem one long edge and two short edges.

☐ Work a row of gathering 3mm (⅛") from the fourth edge and pull up the gathers to fit the bottom of the skirt. Back stitch the frill into position on the cushion along the gathering line (fig.6).

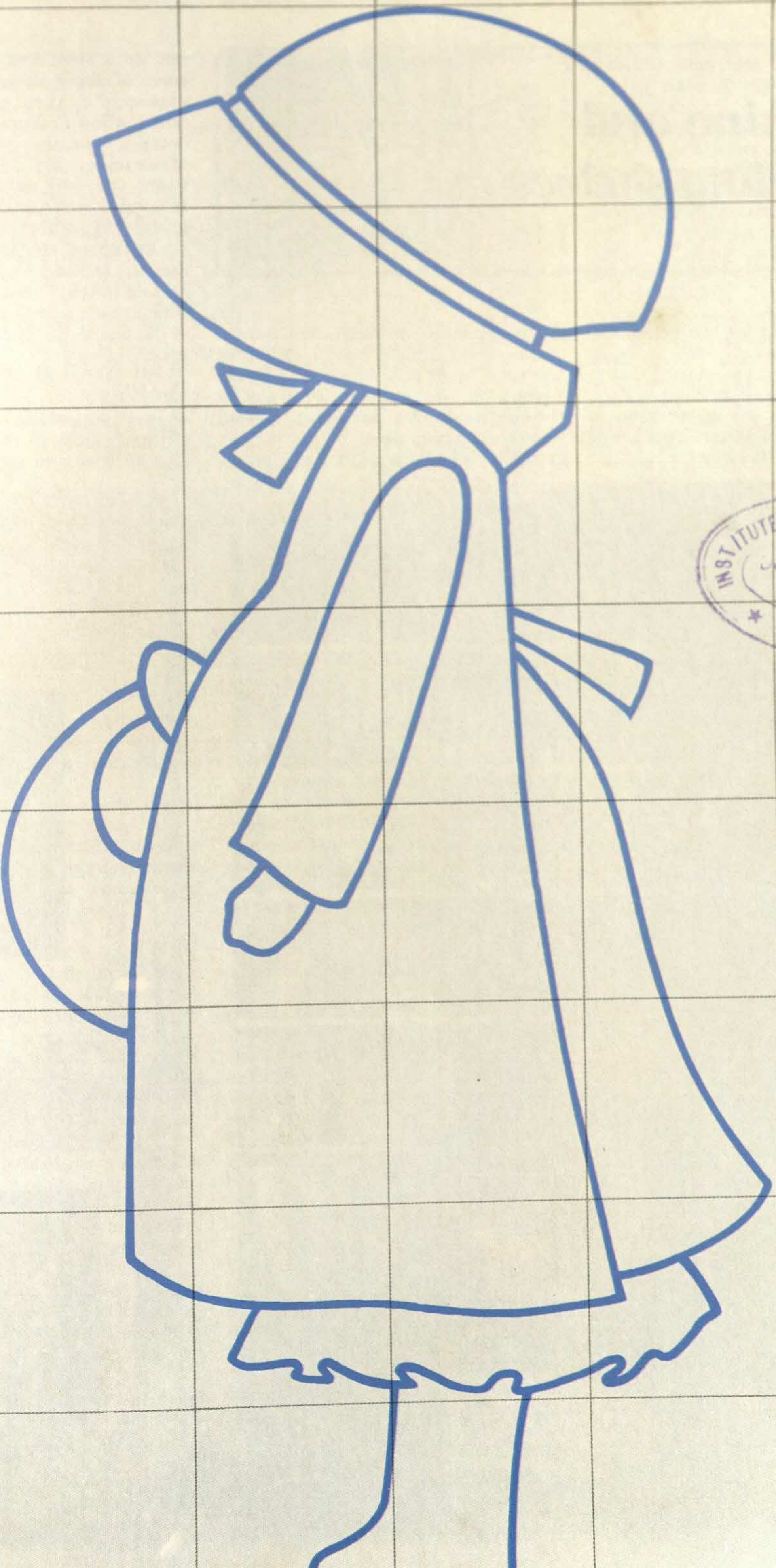
☐ Work the rest of the appliqué by the slip stitch method as described in this chapter. Make sure that the bottoms of skirt and pinafore are slip stitched securely on the gathering line of the frill enclosing the raw edge (fig.7).

☐ Make up the cushion.

5. *Graph pattern for the Polly Pinafore motif. On this pattern each of the squares equals a 5cm (2") sq.*



7. *Skirt slip stitched into position over the raw edge of the frill.*



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Making and installing shelves

One of the reasons for the popularity of carpentry today is that it is so practical. Everyone has his or her own reasons for enjoying making things, but for most it is the satisfaction of having made something useful and saving money at the same time.

Every home needs shelves for storage space—few kitchens have sufficient shelving, in the living room shelves are needed for books and records and in the bedroom and bathroom shelves have a variety of uses.

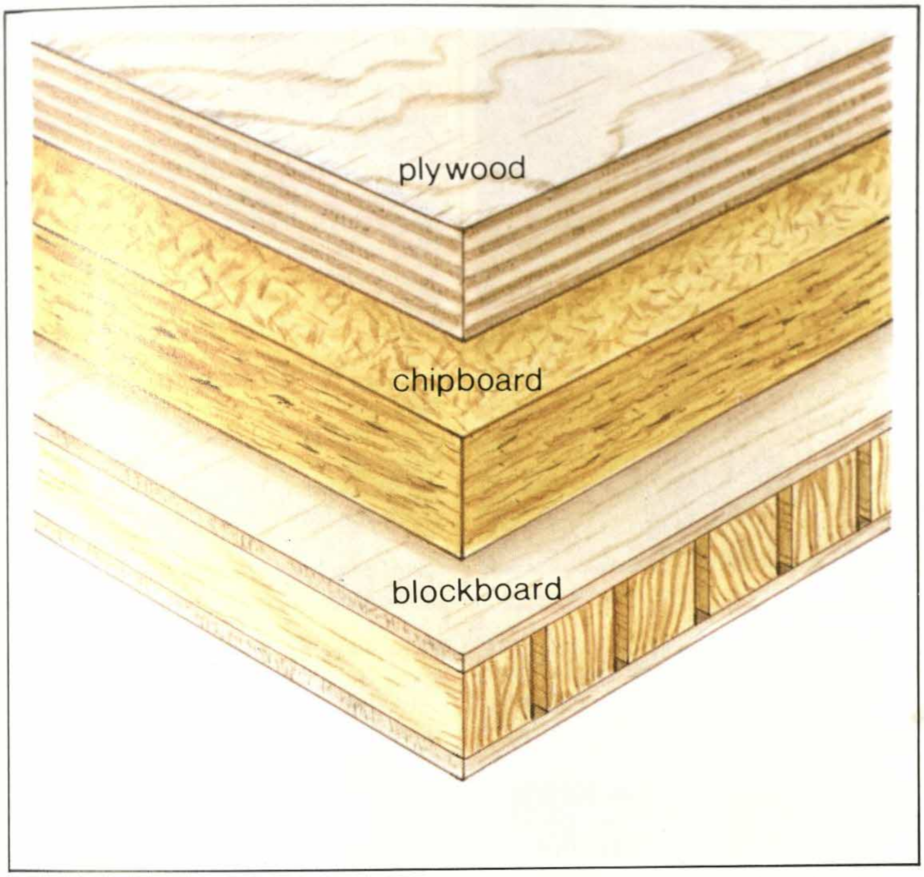
It takes very little skill and time to put up a shelf and there are several ways of doing it, so choose the most appropriate, then add a little extra imagination and craftsmanship to the detail and finish.

Measuring. To find the length of board you will need, measure accurately and make sure the tape is in a horizontal position. If you are building a number of shelves against a wall measure the width at the top and at the bottom of the wall as it could vary, in which case you must adjust the length of the boards accordingly.

Wall-fixed or free-standing shelves

Shelves supported on walls involve drilling a hole in the wall for a wall plug to take the screw. It is easy to

John Bethall



Man-made boards are available in various thicknesses and surface finishes.

put in a wall plug, especially if you have an electric drill.

Alternatively, you can build free-standing shelving. The method shown here does not involve complicated joinery and is quick and easy.

Shelving boards

Softwood. The easiest material to use is ordinary softwood boards about 2cm (¾") thick. The width and length depend on your particular requirements but boards about 22cm–26cm (9"–10") wide are ideal for most books. Measure the length of the individual shelves and calculate the total length of the board required.

You can have the boards cut to the length you require when buying them. If you have suitable boards that need cutting to size, measure and mark them. Use a carpenter's square to get a straight end and saw off the excess.

Since timber is cut to fixed lengths discuss your requirements with the timber merchant who will then cut from existing boards the exact lengths you want for your shelves.

Useful and economical substitutes for softwood board for shelves are man-made boards.

An alcove lends itself to shelving— it provides storage space without projecting into the room. In this system cleats are used for supports.

Man-made boards have advantages over softwood boards in that they can be bought in almost any size and are not limited in width as is timber. Also, man-made boards will not warp if properly and adequately supported.

The boards vary in strength, appearance and cost. The only problem with these boards is that cut ends are not attractive and need to be finished neatly. It does not matter if the ends are out of sight, but if they show they should be covered with a facing strip—any strip of wood or veneer will do.

Plywood is a flat board made of veneers in layers and at cross grain. The number of layers is always odd to prevent the board from warping. The boards are available in various finishes, including a hardwood surface or a plastic laminate. Thickness varies from 8mm (⅓") to 25mm (1").

Plywood is strong enough for most shelving, except where a very heavy object, such as a television set, will be resting on it.

Chipboard or particle board is made of wood chips which are pressed and glued together. The glue content in the board acts as an abrasive so any tools used to cut the board will become blunt more quickly than when cutting wood. However, it is inexpensive and can be used for shelving if supported at regular intervals.

The edges are not very strong so, to prevent them from chipping away, nail a thin strip of wood to the edges for protection.

Chipboard is also available with a plastic or hardwood finish which improves the appearance and strengthens the board. Thickness of chipboard varies between 3.2mm (⅛") and 50mm (2"). For shelving use board between 13mm (½") and 25mm (1)" thick. It's excellent for book shelves.

Blockboard is a thick, strong board made of wood strips, 19mm–25mm (¾"–1") thick, glued together between veneers of solid wood. It is much stronger than chipboard and is ideal for use as heavy duty shelving where long, narrow strips of board have to bear a heavy load. The grain must run along the length of the shelf.

A veneer or strip of wood is essential to the edges of blockboard as the spaces between the interior blocks are rather unsightly.

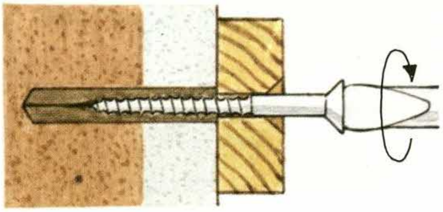
Wall shelves

To attach a shelf to the wall you will need to drill a hole and insert a wall plug to receive the screw.

To drill a hole in the wall. Mark the location of the hole and use a masonry drill bit (a No.10 bit for a No.10 plug) and drill to the depth that the screw will penetrate the wall.

Slide wall plug into hole.

Put the screw through whatever you are attaching to the wall and screw into centre of plug until it won't go any further.



The screw is turned into the plug.

Supporting the shelves. There are several methods of supporting shelves. If the shelves are to fit into an alcove or a recess the easiest way to support them is to use a strip of wood at both ends—called a cleat.

You could also use metal strips, as for adjustable shelving, or L-shaped brackets in wood or metal. If the shelves do not fit into an alcove you can use any method except the cleat supports.

You will need:

Tools

A drill—an electric drill is best but you can use a hand drill and work a bit harder.

A masonry drill bit for No.10 plugs.

Medium sized screwdriver.

Spirit level.

Saw.

Trimming knife—optional.

Shelf brackets. There are many types of brackets available, from elaborate ones to the simple modern L-brackets (fig.1). These screw into the wall and also have one or two holes for screws that hold the shelf down securely.

To put up a wall shelf hold one bracket in position against the wall. Mark the holes with a pencil.

Drill holes and insert wall plug.

Attach bracket to wall with screws.

Hold shelf with one end resting on the bracket. Place the spirit level on the shelf, check that it is level and mark the holes for the other bracket.

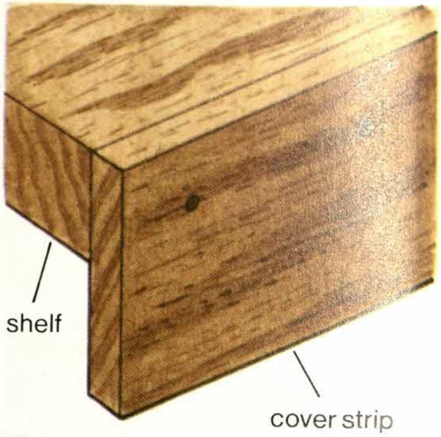
Drill the holes, insert the plugs and screw the bracket to the wall.

Screw the shelf, from the underside, to the brackets with screws that will not go all the way through the shelf.

Metal brackets support this shelving.

Transworld

Cover strip. An attractive way to cover the shelves so that the cleats do not show is to nail strips to the front of the shelves (fig.3). You can buy mahogany strips and nail them with panel pins to the shelves. Set the nails with a nail punch.



3

Free-standing shelves

You will need:

Hammer, saw.

Tape measure or ruler.

Glue.

A sheet of 3mm ($\frac{1}{8}$") hardboard to nail to the back of the bookcase.

The main advantage of free-standing shelves (fig.5a) is that they can be moved from one room to another or from one home to another. So if, for whatever reason, you can't drill into the walls or you don't have a drill then the self-supporting shelves are ideal.

Use timber 2cm ($\frac{3}{4}$") thick for the shelves and the vertical supports. There are several ways of attaching the shelves to the upright sides, the quickest being to nail and glue a cleat horizontally to the sides.

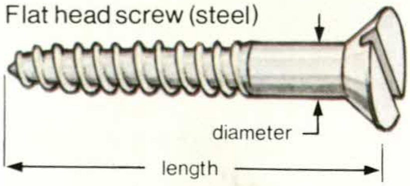
Tool box

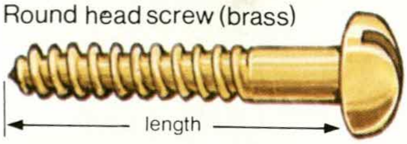
Tools and hardware

Screws and Plugs. There are various types of screws—some have round heads, some flat, some are made of steel and others of brass. In woodwork flat-headed screws are usually used. Use ordinary steel screws or, if the heads show and you want them to look nicer, use brass screws.

You order screws by the length and the diameter. The diameter is indicated in numbers.

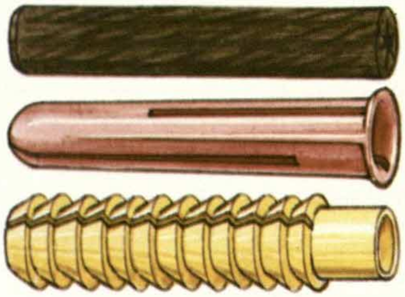
The higher the number the larger the screw.





If you try to drill a hole into a brick wall and then put a screw into it, the screw will pull out easily because it doesn't 'bite' into the masonry the way it does into wood. Therefore, drill a hole slightly larger than the screw and fill the hole with a special wall plug and then turn the screw into the plug. The screw is held secure because it forces the plug very tightly against the sides of the hole.

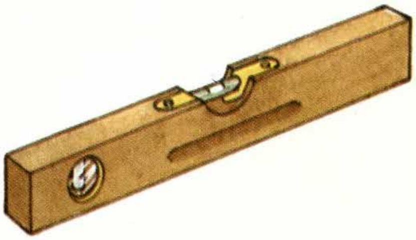
There are various types of wall plugs available, from the old-fashioned fibre plugs to the newer plastic ones. All are equally adequate.



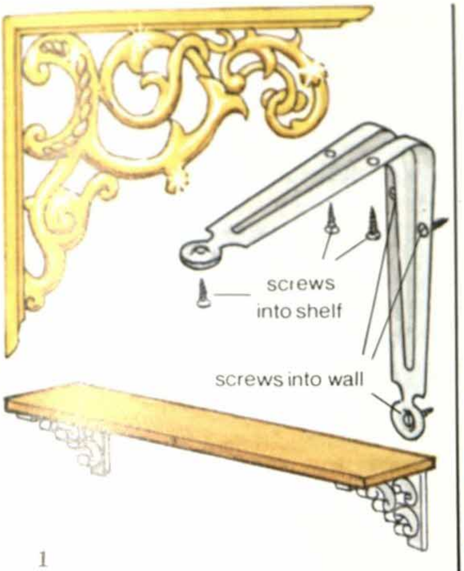
Each screw size is used together with one particular size of wall plug. Thus a No.10 screw is used with a No.10 plug. The plugs can be bought in rods and cut to the required lengths with a trimming knife or they can be bought to match the screws being used.

Use a screwdriver that fits the groove on the screw.

Spirit level. A level will tell you just that—when things are level. The bubble will be centred between the little lines when it is exactly level. So rest the level on the shelf and raise or lower one end until it is level. A spirit level is inexpensive and available from hardware stores.

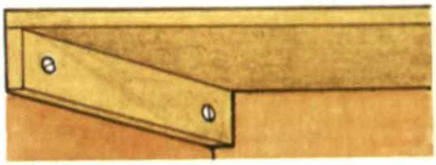


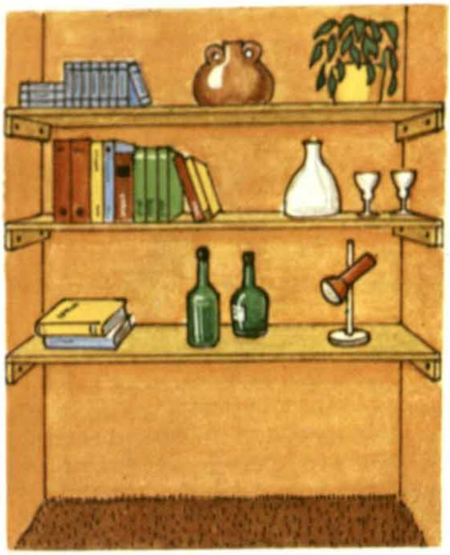
Paul Williams



1

Shelves in an alcove. These are supported at either end by a cleat (a strip of wood) which is attached to the wall with screws (fig.2). Cleats can be cut from any softwood 50mm x 25mm (2″x1″). The length should not be more than the width of the shelf.
Drill holes for wall plugs and attach one cleat.
Hold up shelf with spirit level on it and mark holes for the other cleat.
The shelf can be secured by nailing panel pins through the shelf into the cleats.

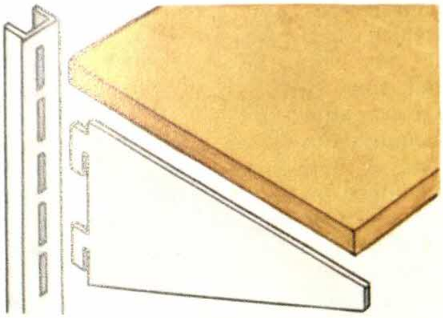




2

Adjustable shelves. You can buy these shelf systems consisting of three parts: vertical supports, brackets, shelves (fig.4).
The vertical supports are so made that any number of brackets can move up or down once the supports have been attached to the wall. The brackets vary in size—short brackets to hold a narrow shelf or longer ones to hold wider and heavier shelving.

There are various brands of adjustable shelving available but they all work on the same principle and are installed similarly. The main difference is in appearance and the weight that they can support. The more expensive types are for heavy duty shelving.
If you decide on this type of shelving discuss the shelving board and the length of the shelves with the shopkeeper who will recommend a suitable metal support and bracket.
For simplicity and neat appearance these shelves are good value and can be finished in any way you wish.



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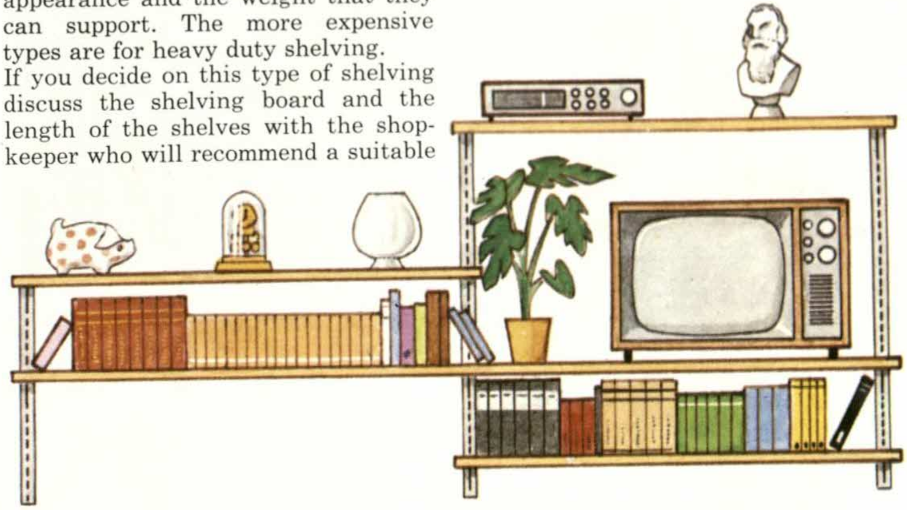
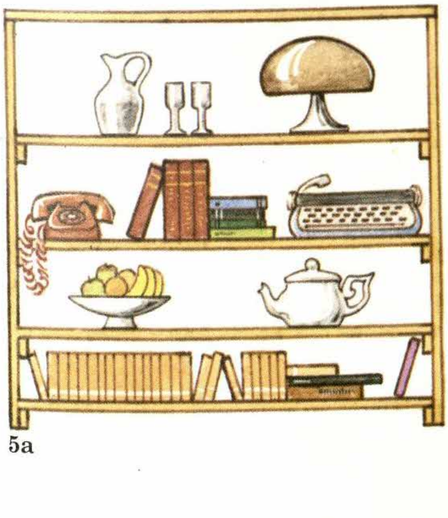
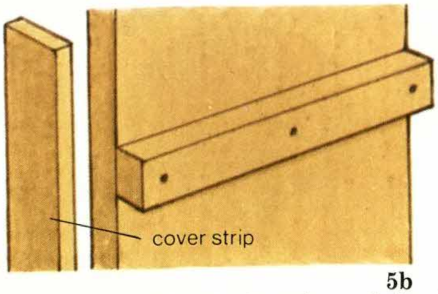


If you wish to hide the cleats, add a cover strip to the uprights (fig. 5b).

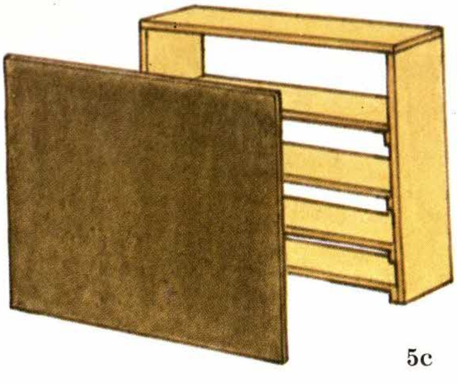


5a



5b

The only problem is that these shelves will topple sideways unless you nail a sheet of hardboard 3mm ($\frac{1}{8}$″) thick to the back, using 2cm ($\frac{3}{4}$″) panel pins (fig.5c).
You can paint the front of the hardboard backing so that it provides a colourful backing to the shelves or cover it with plywood if you want a wood finish to show.



5c

Wet rubbing stone reliefs

Colour — printing 6

Origins of rubbing

Rubbing relief surfaces is an ancient practice that seems to have occurred to the Chinese first. In the 3rd century BC they were cleverly using the technique as a kind of printing press. They carved inscriptions on stone and then rubbed them to make copies on paper for distribution.

Battles, deeds of famous men and similar subjects topical in any modern newspaper were recorded, rubbed and circulated, but to the Chinese the beautiful calligraphy reproduced was just as absorbing as the recorded facts. Only very much later did Europeans realise the inherent beauty of rubbings and begin to collect them for themselves and to experiment with various ways to make them. Some techniques, they found, were better suited than others for certain kinds of surfaces and, although the most widely used method today is heelball (see Printing chapter 5, page 328), the earliest technique used by the Chinese is still preferred for a variety of surfaces by many rubbing enthusiasts. It is called wet rubbing or dabbing.

Wet rubbing

Wet rubbing or dabbing involves applying specially dampened paper to an incised or a relief surface and then inking it.

Coins, leaves and ferns, even brick walls can be dabbed but the surface for which it is pre-eminently suitable is stone. It is not suitable for church brasses and takes considerably more skill to do than heelball rubbing but, once mastered, it is a much quicker method, requires less energy and so is less tiring. It gives a superior impression of deeply incised surfaces and of textures—hairline cracks, pitted areas and roughness are all recorded in the final print.

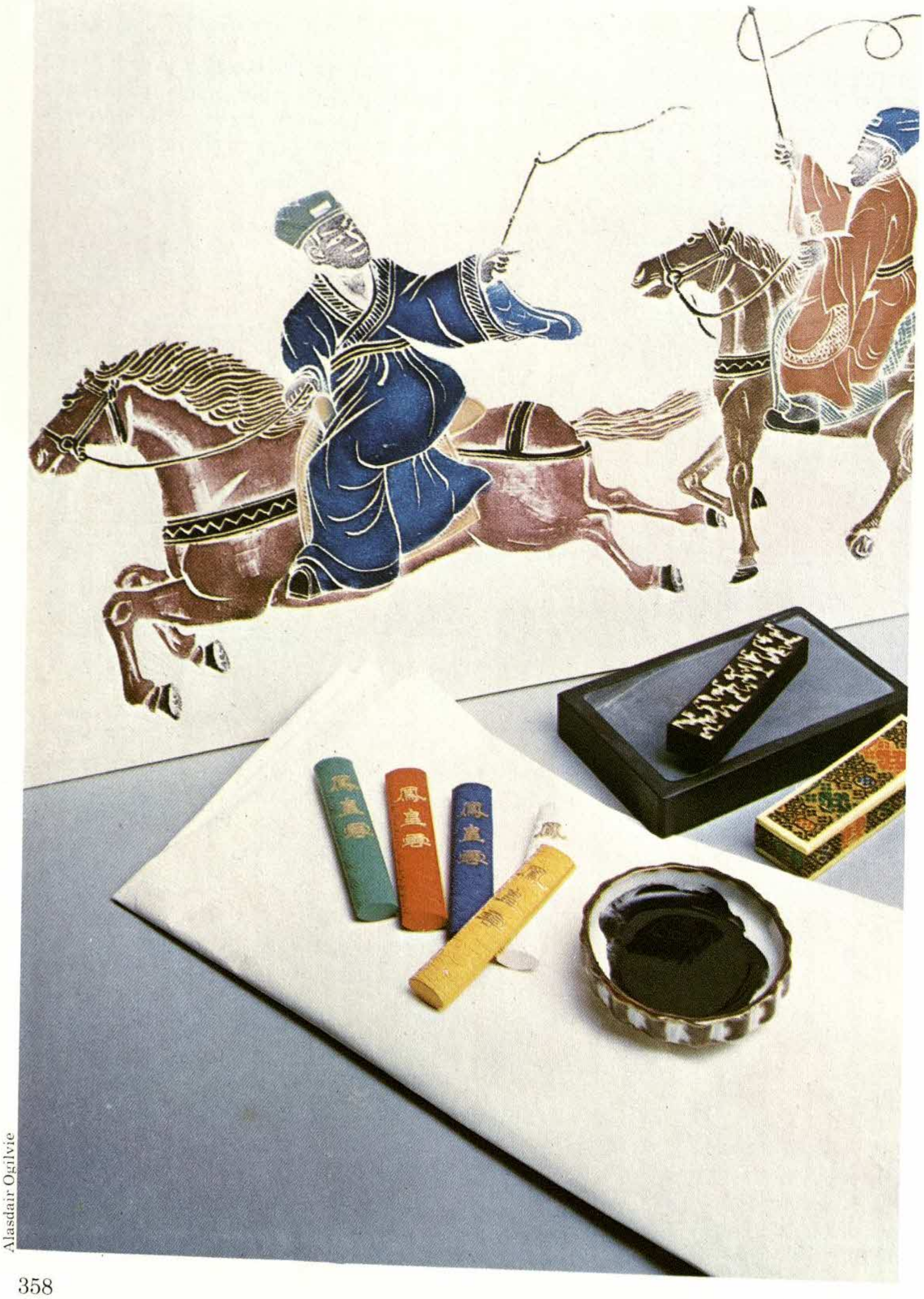
Dabbing has been used to take impressions of Mayan monuments, Egyptian tombs and Asian temple reliefs but it is just as useful nearer home. Local churchyards and cemeteries have a wealth of inscriptions, often engraved in very beautiful lettering; some are sad, some factual, a few amusing; all are evocative.

Equally interesting are the motifs on many tombstones—pretty cherubs, garlands, borders of woven vines and flowers. But half the enjoyment is in wandering through quiet, often remote, churchyards—looking, reading epitaphs, deciding on the best motif or the most effective inscription.

A series of epitaphs or relief figures can be framed or they can be collected in a scrapbook. They can be made with conventional black ink or different coloured inks as in the Chinese rubbing on the left.

Materials you will need:
Rice paper.
Oriental drawing ink.
Dabber.
Stamping pad or palette.
Methyl cellulose (optional).
Sponge.
Stiff brush for cleaning. Paper towels.

Rice papers from China or Japan are the best papers for dabbing because they have wet strength and they stretch easily and can be pushed into crevices.



Chinese ink sticks used for wet rubbing are beautifully shaped and packaged. They are ground down on a special stone.

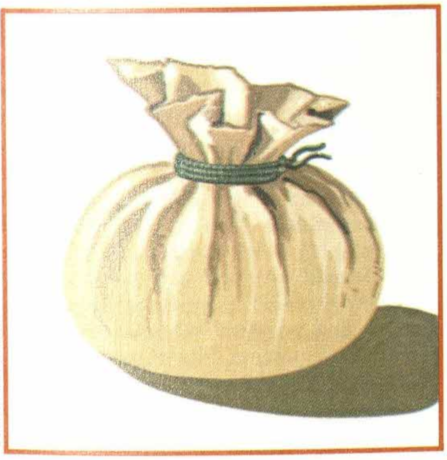
Alasdair Ogilvie

Also they become quite transparent when wet, enabling you to see more clearly what you are doing. These rice papers are available at specialist paper shops and often in oriental markets.

The term 'rice paper' is confusing. Oriental papers used for painting and rubbing are made from mulberry and other barks, not from rice. The Japanese do make paper from rice and in the West the name has got stuck to both varieties, causing some misunderstandings. Japanese rubbing paper is sometimes known more appropriately as mulberry paper. The correct name for Chinese-made rubbing paper is Hsuan paper.

These papers come in several grades and the lighter ones give better detail. Mino is an excellent grade of Japanese paper for rubbing, as is Gampi which is even lighter, but Gampi cannot be bought larger than 45.5cm x 61cm (18"x24") and so is limited in the surfaces it can be used on.

Dabbers are used for applying the ink and can be made by covering balls of cotton wool with chamois and tying all the corners together with string as illustrated (fig.1). The resulting knot can be used for holding the dabber while applying ink.


Trevor Lawrence

1. *A dabber can easily be made at home.*

Ink. Oriental drawing ink is best for making wet rubbings but some people do use printing inks. Oriental inks normally come in stick form and must be ground down on a special abrasive stone or pulverized with a knife or pestle and mortar and then mixed with water to the right consistency.

For rubbing on light-weight paper do not make the ink too thick. Try practising with different consistencies using a coin for your relief surface.

The correct name for Japanese ink is Sumi, while the Chinese ink sticks are called Mo.

Methyl cellulose is a mild glue available at most chemists in tablet or powder form. One teaspoonful mixed with 0.5lit (1pt) of water makes a mixture which will stick paper to a relief surface to make dabbing easier.

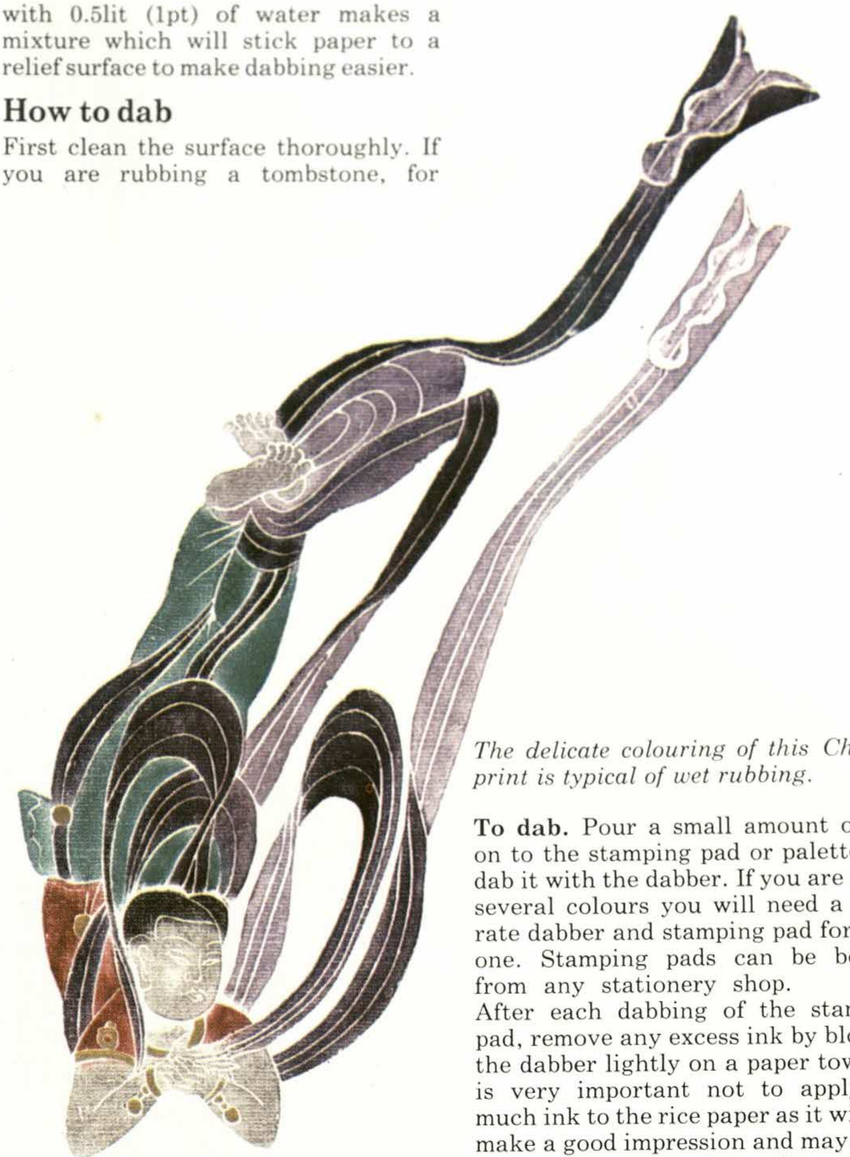
How to dab

First clean the surface thoroughly. If you are rubbing a tombstone, for example, any grit or lichen will show up on the finished print.

Hold the rice paper against the stone and, using a sponge, gently wet the paper with the methyl cellulose mixture. This will cause the paper to stick to the surface. Take care not to tear the paper.

Press the paper against every detail of the stone. If the incised area is very deep, as in the case of some lettering, do not press the paper all the way into the crevices—part way will do.

Some people prefer to dispense with methyl cellulose altogether and instead attach the edges of the paper to the stone with masking tape, as in heelball rubbing, and then dampen the paper with water. In this case, the paper must be kept damp, often by continuous wetting during the dabbing process, since it is the dampness that causes it to cling to the relief surface.



The delicate colouring of this Chinese print is typical of wet rubbing.

To dab. Pour a small amount of ink on to the stamping pad or palette and dab it with the dabber. If you are using several colours you will need a separate dabber and stamping pad for each one. Stamping pads can be bought from any stationery shop.

After each dabbing of the stamping pad, remove any excess ink by blotting the dabber lightly on a paper towel. It is very important not to apply too much ink to the rice paper as it will not make a good impression and may penetrate to the surface beneath.

Begin to dab the surface of the rice paper lightly. Do not wipe or make strokes with the dabber but pat it deftly against the paper, re-inking when necessary.

Getting the correct dabbing motion requires practice and beginners are advised to start with an object that will not be harmed by mistakes.

Dabbing tombstones and monuments needs responsibility as well as skill. Marking them with ink can be ruinous and leaving bits of paper or masking tape stuck to them is inconsiderate. If you do get ink on a stone wipe it off as soon as you remove your rubbing. It will come off quite easily if the stone is still damp.

Mounting dabbings

Since they contain no wax, as do heelball rubbings, dabbings can be ironed flat and either cut out and pasted on to different backings for framing or mounting on board, or they can be mounted as they are.

Herbal oils from nature

Home herbalist 1

Crush a few leaves of thyme between your fingers and the sharp smell is unforgettable. Thyme was one of the herbs that the Romans brought to Britain—among hundreds that they felt were quite indispensable and so imported and planted—rosemary was another.

Herbs have a far longer history even than that. The Egyptians buried urns of oils and fats scented with resins, herbs and flowers beside their dead pharaohs and considered the liquids so precious that tomb robbers stole them in water skins but left gold and alabaster treasures behind.

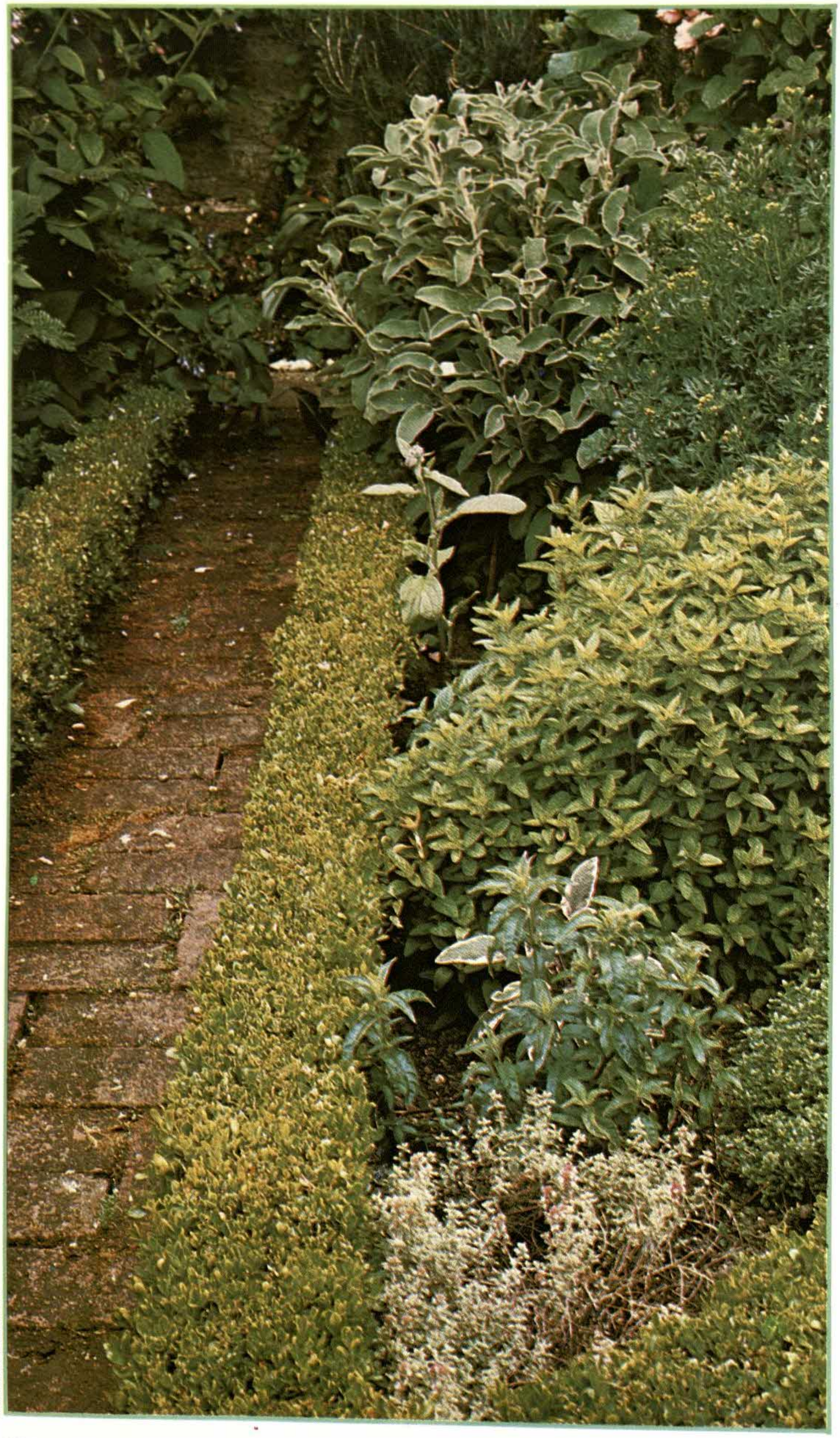
Tudor Londoners planted herbs to be crushed among the paving stones to sweeten the unsewered streets and disinfect against the spread of plague. The camomile lawn at Buckingham Palace possibly comes from wild camomile growing in the area 300 years ago. Herbs have been used for many things—perfume, incense, seasoning, aphrodisiacs, as a cure for the common cold and a thousand other ills, and as an elixir of youth.

Although widely used for health, beauty and perfume still, herbs are most of all valued for seasoning food. They give back to the nose and palate those delicious natural tastes and smells we miss so much in processed food. They are also rich in vitamins, minerals and essential oils, which are very good for you and give each herb its individual pungent flavour.

Growing and harvesting

You can grow herbs in your own garden very easily. When you get to know the strange, sweet or exotic scents you can decide which you really like, whether it is the 'green' smells of some leaves and saps or something almost narcotically sweet like rose geranium. Herbs usually like a sunny, sheltered position. A few vary—lovage loves the damp, sage the dry, woodruff the shadow of beechwoods. Some gardening books, or a herb gardening book, will give you details of types of soil and amounts of sun different herbs need for their propagation, flowering and harvesting.

If you have no garden then grow herbs in pots. Many will do well in a 10cm-13cm (4"-5") pot in a sunny, well-aired place with an even temperature—preferably not the kitchen with its changing steamy atmosphere. Sage, thyme, tarragon, rosemary, basil, geraniums, chives and fennel are among ones that will thrive. Rampantly rooting herbs like mint, pennyroyal and tarragon need their own pot or planter, but



Michael Wickham

Herb gardens are beautiful to see, pleasant to walk in and extremely useful for making delicious scents and spices.

others could be grouped in a window box, back-door or roof planters or along any south-facing window-sill.

You can buy ready-to-germinate herbs in small peat pots of their own to make herb gardening even simpler. Keep pot herbs well watered but also well-drained.

The harvesting of herbs for herbal oils and vinegars is usually done in the summer time just before flowering, when the volatile oils are at their peak. Pick them after the dew has dried and before the sun is on them, drawing out their dramatic properties in its heat. Do not pick when the herbs are damp after rain.

Herbs should always be stored in cool, dark dry cupboards.

When handling herbs try to avoid bruising and pick only perfect leaves. Flowers are picked when fully open, berries when they are round and richly glossed and coloured, roots are usually dug in the autumn.

After harvesting there are several ways to concentrate the essential oils and aromatic properties so that you can use them in culinary and cosmetic oils and vinegars, in sachets or pot-pourri. One or two methods are very simple for the home herbalist.

Extracting essences

An infusion is made by pouring boiling water over the herb and allowing it to infuse—just as you do when you make a pot of tea. As in tea the water should be just boiling, but you must not boil the herb in the water, which is another process called decoction.

Infusion is used for making herbal teas or tisanes, in which case you don't steep the herb for more than 10 minutes, but for cosmetic waters you can steep the herb for some hours. Use an earthenware or china pot, not a metal one.

Occasionally cold water or milk is used instead of boiling water.

Decoction. This is often used for barks, roots, seeds and chips and the boiling is done in an enamel or stainless steel saucepan which is covered all the time. Don't use a non-stick or aluminium saucepan. Some decoctions need boiling for at least half an hour, but seed teas usually take about 10 minutes.

Maceration. In this method you just steep the herb in oil and the volatile oils from the herb are absorbed by the soaking oil—a fact first realized some 4,000 years ago. The oil, with the leaves or flowers of the herb in it, is best left in a sunny spot, so macerating herbs is mostly done in the summer-

Herbs add their own special flavours to cooking oils. They can be made up by simply steeping the herb in the oil.

Roger Phillips

time. It means too that you can use freshly harvested herbs. However it is possible to gently heat the herb oil instead of leaving it in the sun.

For kitchen use steep the herbs in corn, olive or sunflower oil, groundnut or soya oil. For bathroom use there is olive or safflower oil or, from the chemist, avocado or almond oil. Olive oil has a dominating flavour and smell so make sure you like it before using it.

Undiluted essential oils of many herbs, spices, flowers and barks can also be bought from herbalists or herb stockists. Some of the names sound very romantic—patchouli from Indonesia, sandalwood from Mysore and cedarwood. Then there are verbena, lily of the valley, geranium and rose geranium, lavender, tuberose, violet and others.

Making herbal oils

Herbal oils are a boon in the kitchen if you want to marinate, brown meats and braise, baste, make fried rice, cook in oil and make salad dressings.

Herbs that make good culinary oils are basil, savory, fennel, thyme, rosemary (delicious for browning meats) and tarragon. The taste of basil goes well with tomatoes, so cook ratatouille in basil oil; fennel goes well with fish and in salads; tarragon suits fish, poultry or meats; thyme is excellent with vegetables.

Crush the freshly cut herbs in a pestle and mortar or put through a blender according to its instructions. Put 2 tablespoons of the pounded herbs in a 0.3lit (½pt) bottle and fill three-quarters full with sunflower, corn or vegetable oil. Add 1 tablespoon of wine vinegar. Cork bottle tightly.

Put the bottle on a sunny shelf and leave it for 2 or 3 weeks, shaking the bottle once or twice a day. After this time, strain off the oil, pressing all the oil out of the crushed herbs.

Repeat the process with freshly cut herbs for another 3 weeks. Then test to see if the oil is sufficiently saturated. A little oil on the back of your hand should smell strongly of the herb. If there is not enough sunshine to help bring out the flavour of the herb, you can put the tightly corked bottle into a double boiler and warm it below boiling point for some hours each day for a week or so.

When the oil is ready and strained put a sprig of the fresh herb in as decoration.

Bath oils. These are made in the same way as culinary oils, keeping one or two points in mind. The first is that you want a light, refreshing scent.

After, say, the use of an eau de cologne mint bath oil, your aim is to smell deliciously fragrant and not like a leg of lamb. Strong smells tend to deteriorate into stinks. Secondly, the ingredients are a little different. Good skin oils are olive, sunflower, safflower, sesame seed, avocado and almond oil. Then choose your aroma. All the mints and pine, for example, have an invigorating, fresh smell. Rose geranium and lavender, which go well together, are evocative floral smells.

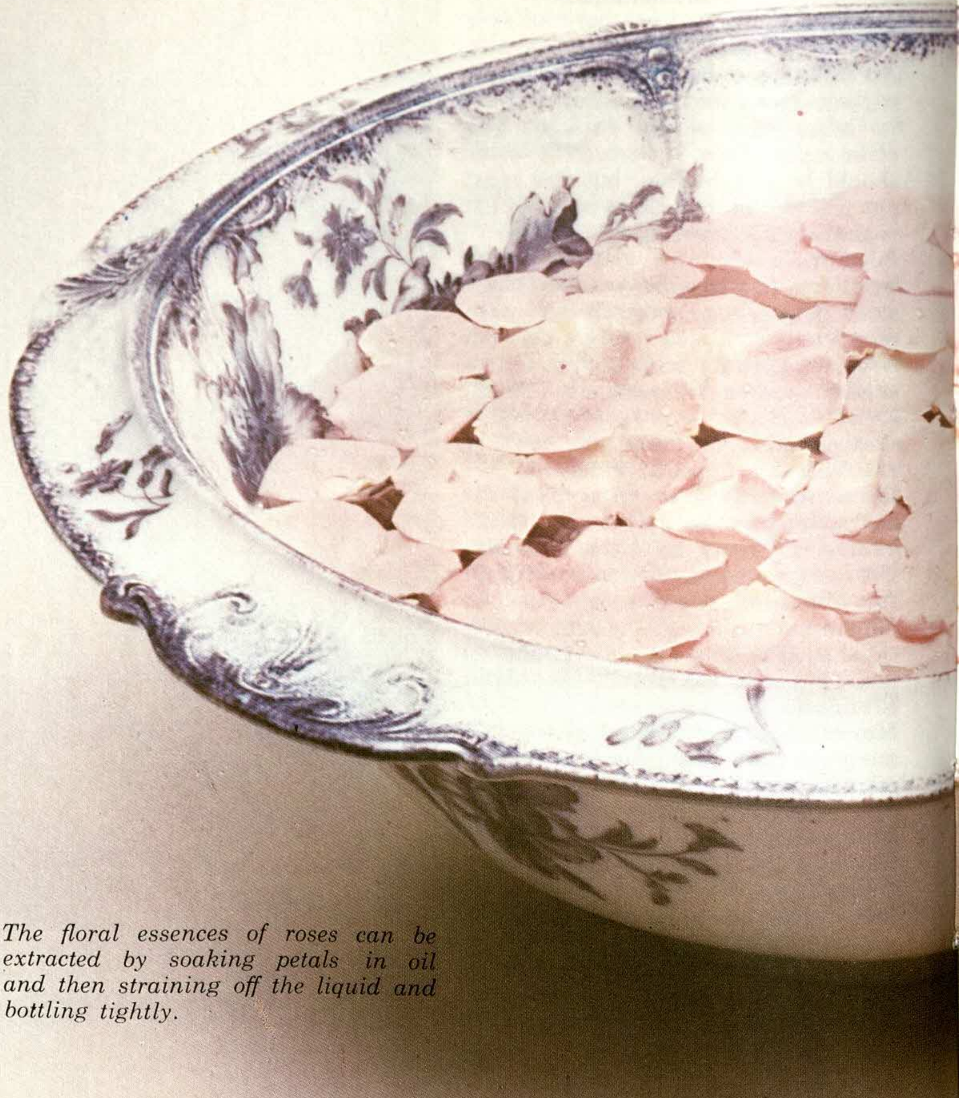
Herbal baths can be balmy or invigorating, depending on the herbs you use.

Camomile, rosemary, geranium, roses, elder flowers and violets, make delicious bath oils. Elder leaves, nettle leaves, well-boiled juniper shoots, thyme and lovage are healthful too.

A few drops of lavender oil in a tepid foot bath relieves tired feet.

Into a large bowl pour 1.2lit (2pt) of oil, put in as many fresh flowers or leaves as it will take and cover. Let the flowers soak for a couple of days in the covered bowl.

Remove them, strain and squeeze out the wilted blossoms. Then add as many fresh blossoms to the oil as you can. Leave again for 2 days. Strain out the flowers, squeezing them well again. Do this with about 10 batches of flowers (now you see why perfumers need fields of them). During the soaking



The floral essences of roses can be extracted by soaking petals in oil and then straining off the liquid and bottling tightly.

always keep the bowl covered.
Finally strain the oil and store in tightly capped or corked bottles.

Herbal vinegars

You can have culinery or cosmetic vinegars and some, like lavender or rose vinegar, that are both. Vinegar, like alcohol, is another good medium for absorbing the aromatic qualities from herbs.

You can use lemon balm, basil, borage, garlic, salad burnet, dill, fennel, marjoram, summer savory, mint, tarragon (tarragon vinegar can also be bought) and thyme. Or mix some of them—such as summer savory, marjoram, chives and tarragon—in one vinegar. Another combination is basil, rosemary, mint, tarragon and bay.

Use red or white wine vinegar, cider vinegar or malt vinegar. White wine vinegar goes well with tarragon, marjoram, basil and salad burnet; cider vinegar suits mint, and red wine vinegar goes with garlic.

Use only fresh leaves. You will need about 2 cups of leaves to about a quart, or just over a litre, of vinegar.

Wash and dry the leaves and pack loosely into a wide-mouthed glass jar. Pour over the vinegar. Cover the jar tightly and put it where you will remember to shake it, or stir the contents with a wooden spoon, every other day.

After 10 days taste it. If it is not herby enough take out and drain the leaves and put more in. Leave for another 10 days. Check again.

Herbal vinegars will make hair shine.

When the vinegar is flavoured enough, strain it into bottles through a funnel. Push in a sprig of herb for decoration and cap tightly.

Vinegar from seeds. Herbal vinegars from coriander or dill seeds have a spicy flavour—dill tastes mildly of caraway. Bruise the seeds with a pestle and mortar. Put in a jar and pour warmed vinegar over. Cover the jar tightly and put in a warm place for two weeks, shaking the jar from time to time. Strain when ready through filter paper, muslin or cheesecloth. Bottle and cork tightly.

Garlic vinegar. Put garlic cloves into vinegar. Leave for 24 hours and then remove them.

Lavender vinegar. For this steep the lavender heads in white wine vinegar. Infuse on a sunny shelf.

Rose vinegar. Use the petals of scented roses in white wine vinegar. Both rose and lavender vinegars can be used for cooking as well as in the bath.

Cosmetic vinegars

Herbal vinegars made with cider vinegar are a healthful, fragrant addition to the bath, helping to refresh and soothe the skin. Use about a cupful to a bath. Lavender, roses, rosemary, mints, thyme, geranium, bergamot and balms all make good bath vinegars.

Steve Bicknell

Monochromatic schemes

Design know-how 13

The next few Design know-how chapters show various ways of using colours. The principles are the same for all materials, whether you're working with beads, tissue paper, paints, feathers or weaving wools.

If the idea of making your own creative decisions about colour schemes seems a bit too ambitious, just think: virtually everyone who wears clothes is already deeply involved in exercising judgement or instinct about colours, textures and proportion.

This chapter considers monochromatic schemes which are based on shades of one colour, for example a gamut of honey shades from palest biscuit to deepest tan. This emphasizes the value of texture. Following chapters discuss:

Related colour schemes are those which are next door to each other on the colour wheel, such as violet and red, blue and green, sometimes known as 'cousin' colours.

Complementary colour schemes are usually thought of as contrasting colours — for example, red and green, blue and orange, yellow and violet — which are diametrically opposite each other on the colour wheel. It's important to know how much of each to use in order to strike a happy balance.

Polychromatic schemes invariably build up lots of colours to create a candy-box, or flower-garden mixture. The question is, which sort of colours work well together, and which sabotage the effect?

Accent colours are small flashes of colour, a highlight, to enhance the main colour scheme. A surprisingly 'illogical' colour can often give a fresh new look to a tired old scheme.

Monochromatic schemes are those based on one colour, one hue, with variations in intensity and value.

When one colour is mixed with black or white, something darker or lighter than itself, it changes value without changing hue, for example a light green or dark green. When mixed with grey, green becomes less intense, greyer, softer. Any one colour will vary in lightness, darkness and brightness and can form the basis for colour in craftwork.

Simplicity and subtlety are the keynotes to the use of monochromatic schemes; used well they can be immensely sophisticated and hold together composite materials, shapes and patterns which would otherwise be confusing.

The use of one colour itself provides a definite theme, is spacious and quiet, relaxing rather than overstimulating; it will also emphasize detail and provide a good background for other colours.

The choice of any particular colour will clearly be related to what you want to do with your craft. Is it workmanlike or purely decorative? Will it be worn as clothing or hung on the wall? Although there are no hard and fast rules on this it is revealing to observe the effects which different colours have on you. This is important in any use of colour, but in monochromatic schemes it's especially important since you will be using just the one colour to set the mood and scene.

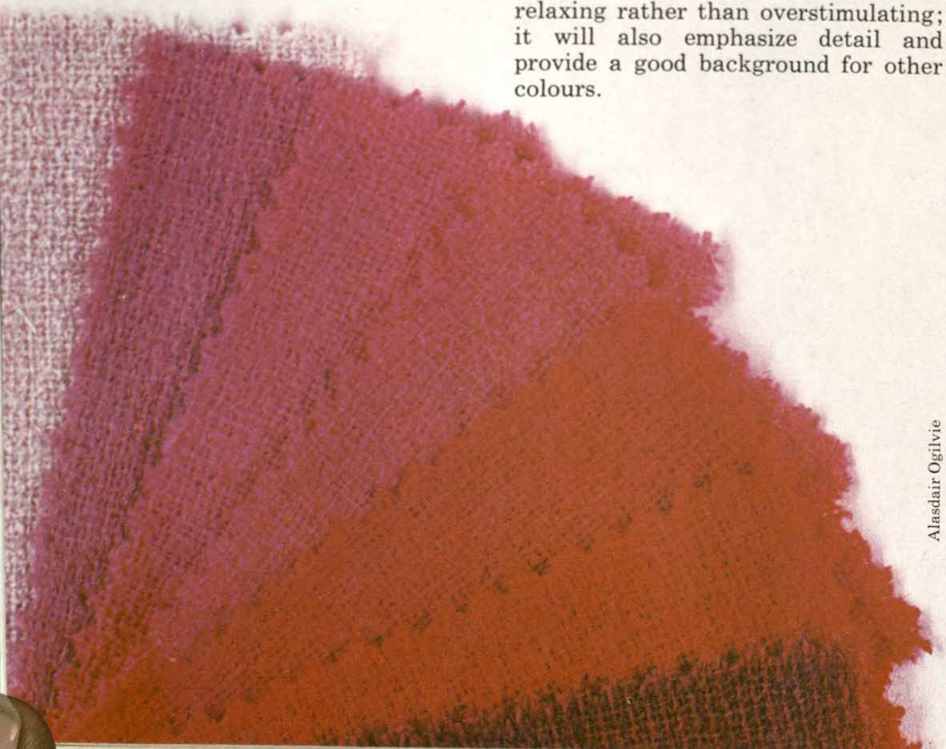
Certain colour schemes in nature can be monochromatic—sky, sea, wood, birds, moths often reflect variations of one colour and show differences in light and dark, soft and intense, dull and exciting. Take a forest in spring—it's made up of every conceivable variation of green. In the same way your craft may be best suited to a single colour scheme which will highlight its intricate design.

Texture is very important when using monochromatic 'schemes—rough or smooth, coarse or fine, soft or hard, bright or dull, polished or painted—different textures can be shown in their full beauty and distinctiveness in monochrome when they would get quite lost or covered over if several colours were let loose.

The same colour can be modified by different materials and will appear to be different. A red dress the colour of a ruby, for example, will not seem to be the same colour as the actual ruby. This is another occasion when texture may be emphasized. Different fabrics, for example silk, wool and leather, if used in combination, will reveal their individuality more clearly without any distraction from competing colours.

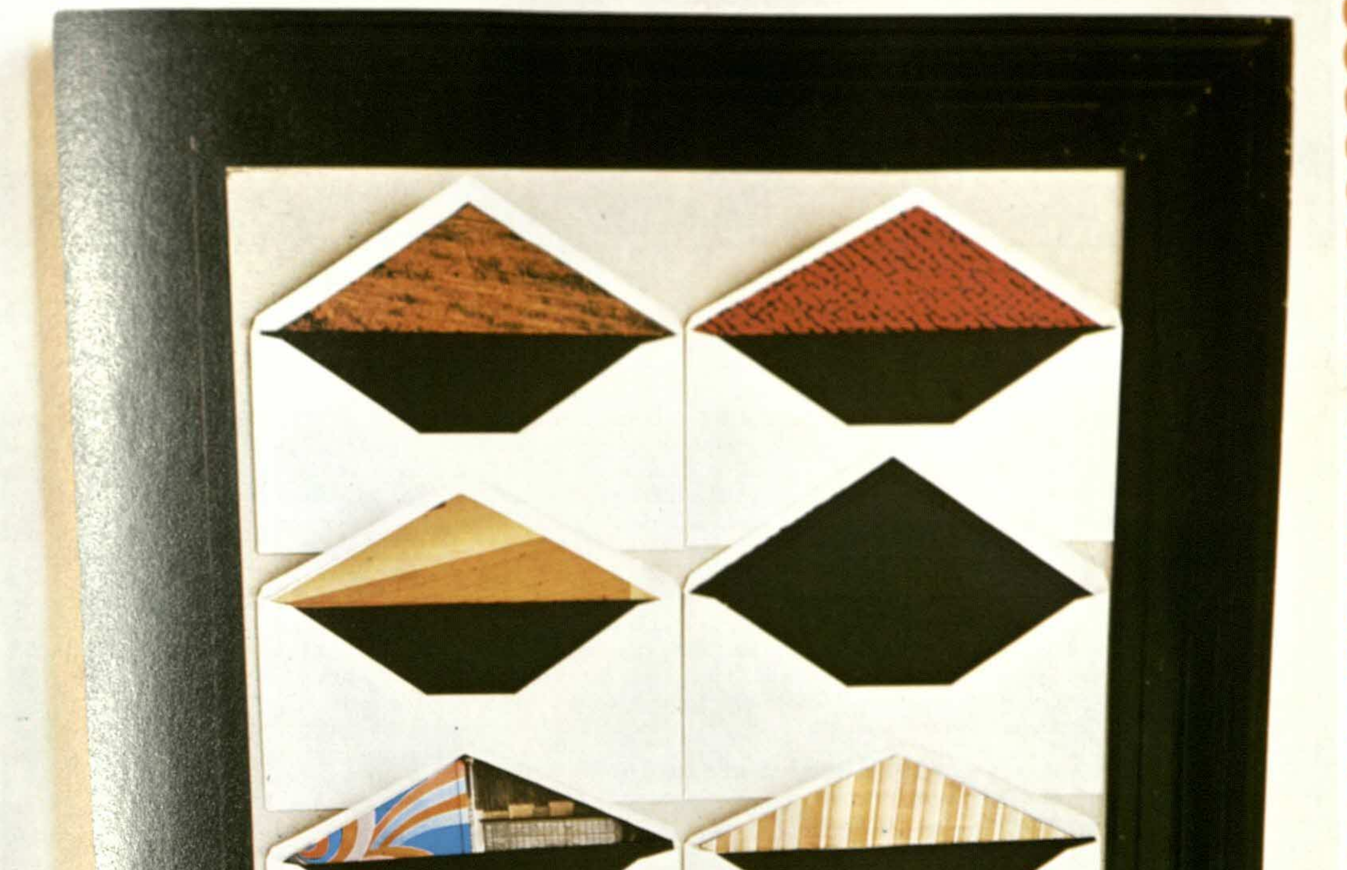
Form and shape. A focal point can sometimes be emphasized by a bold contrasting colour but at other times a more discreet use of shades of the same colour will be just as effective—it's the difference between shouting and a subdued conversation. Clothes may provide a good example of this—how many times have you been caught by the splash of colours only to miss the line of a dress? Again, the shape of a piece of pottery will come through in a mixture of browns, for example, while an array of colours would just obscure the line.

One-colour schemes can be very striking and attractive, particularly combined with and emphasizing texture, natural pattern and different materials. Without this variety of texture they can become dull and rather 'safe' but, used in this way, monochromatic schemes can be most beautiful.



Alasdair Ogilvie

One-colour schemes give a variety of shades, like this group of subtle reds.



Camera Press

Creative ideas 13

Making collages
There are innumerable objects in everyday household use that are just thrown away when they've served their immediate purpose. But why waste these things when a little thought about using them in another way and a careful choice of colour, can produce highly graphic and original collages?
These collages can find a new use for old matchboxes, coloured paper, out-of-date magazines and even plain envelopes.
5mm ($\frac{1}{4}''$) chipboard is used for the backing and an all-purpose glue to attach the objects to it.

A quick and easy collage.

Envelope collage. By gluing coloured paper to card, cut to fit within the envelopes, the scheme of this collage can be changed ad lib. You could also put cut-out figures and objects in the envelopes, for a change.

Burnishing and sgraffito decoration

Pots that are to be fired in a bonfire cannot be glazed, because the heat generated by a fire of this kind is not sufficient to bring about the necessary chemical changes in the glaze.

They can, however, be decorated in a way that is traditional, very attractive, and which goes some way towards making them impervious to water, as glazing does.

Burnishing unfired pots is a technique that goes back nearly 5000 years, and was practised by the peoples of prehistoric Egypt, Europe and the Middle East. Examples of this ancient and beautiful burnished ceramic ware can be seen in museum collections all over the world.

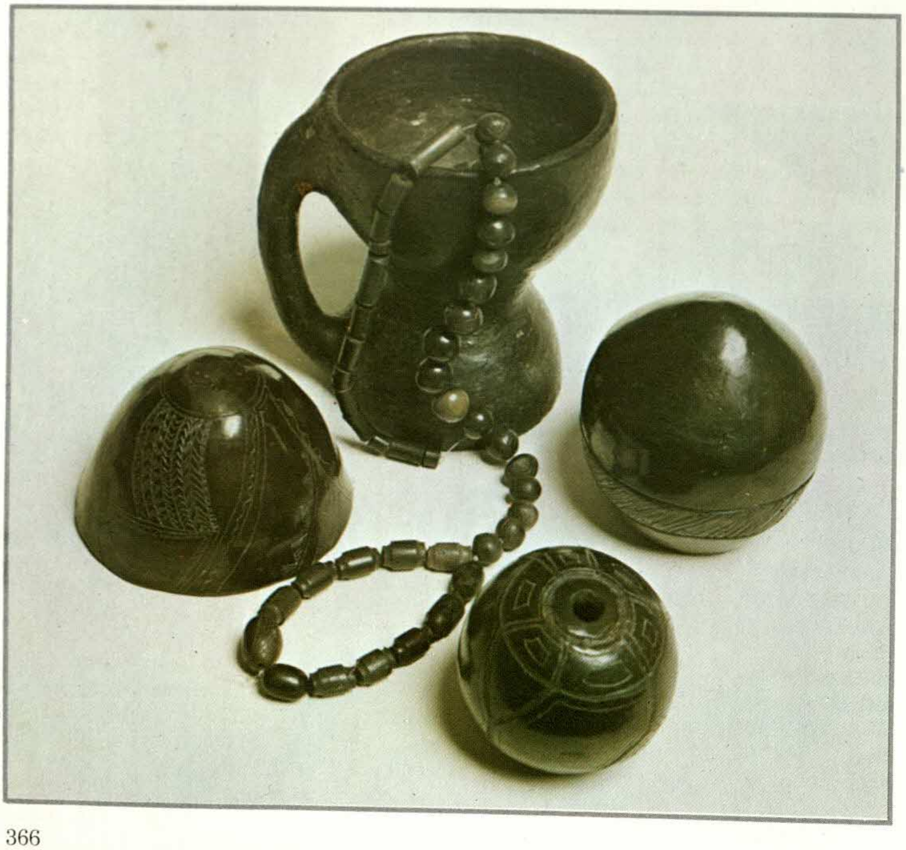
Modern use of the technique

In many countries, decorative burnishing of pottery objects has become an art-form in itself. The Pueblo Indians of New Mexico and Arizona, for example, produce highly burnished and decorated ceramics, some for domestic use and others for spiritual and ceremonial purposes. The Peruvians of South America have for centuries produced beautiful vases and vessels, many of which are burnished black.

For a large number of African tribes clay objects still play an important part in everyday life even today. Clay is used to make a wide variety of items from cooking pots to sculptured ritual and ceremonial objects and toys, beads and tobacco pipes. Large storage jars are also made for keeping family supplies of grain. The domestic pots, in particular, have to be burnished because the process helps to seal the surface.

Burnished Sudanese ware

In the Sudan, for example, many items of domestic ware are frequently burnished and decorated with sgraffito. Siddig El'Nigoumi is the potter shown in the illustrations overleaf, and as a native of the Sudan he is very familiar with this traditional and very attractive decorative method.



Below. Rear: incense burner from Sudan. Left and right: pots and beads designed by Christine Marsh. Centre: pot designed by Annabella Hunter.

Nelson Hargreaves

He now teaches at art colleges in the south of England, and continues to make his own very beautiful and individualistic pots. He specializes in burnishing and incised decorations, and is now experimenting with sculptural forms in clay. His work is exhibited regularly, both nationally and internationally.

The traditional coffee pot, known as the Jabbanah, is made with very thin walls, and then burnished with great care. The Sudanese craftsmen burnish with a very smooth shell which comes from the Red Sea and which is chosen to fit comfortably into the palm of the hand.

They rub the shell over the surface of the clay with a gentle circular motion until a smooth, shiny effect is achieved. The pots are then decorated around the neck with a carefully planned scratched pattern.

Jabbanahs of different sizes are made to be used for all occasions, from everyday events to weddings and great celebrations. It is thought that greasing the pot every time it is used helps the burnishing to last longer, and gives the pot a very attractive shine.

Other African examples

Burnishing is also a common practice in other parts of Africa. In Nigeria, Ghana, Zambia and Ethiopia, for example, different techniques are applied to different types of clay. The clay is often a very attractive light red in colour, and occasionally graphite is used to vary the effect.

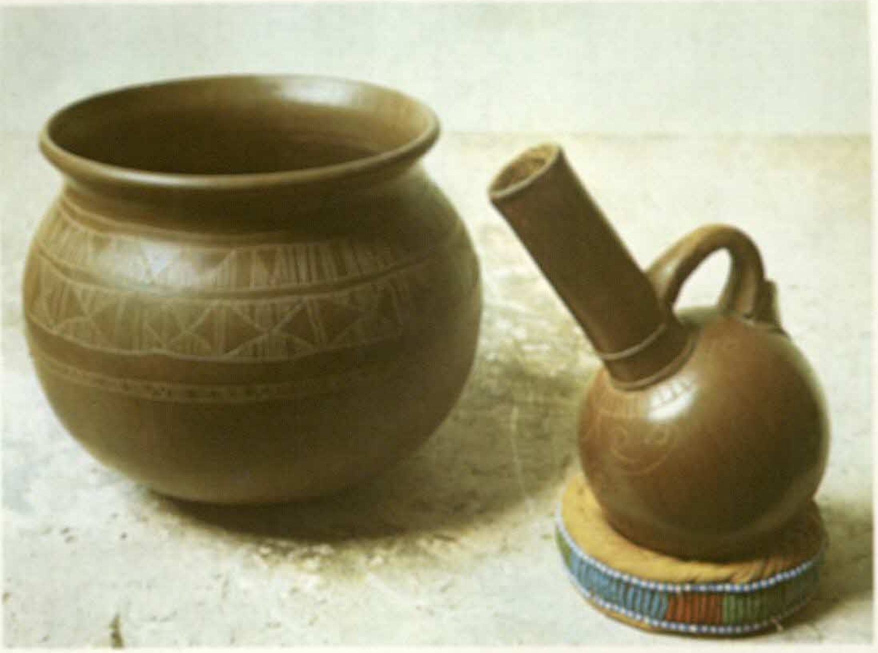
The graphite is powdered, then mixed with water or fat and rubbed on to the pot. The pot is then burnished with a smooth pebble to give a black, lustrous finish.

The pots made in these countries are usually fired in semi-open fires which reach a temperature of 500°-700°C (932°-1292°F). The burnished effect on the surface of a pot tends to disappear if it is heated above about 900°C (1652°F), so it is an ideal technique to experiment with in a bonfire firing.

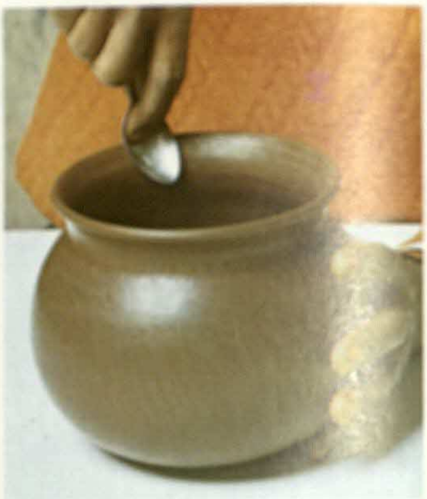
To burnish a pot

For a first attempt, it is a good idea to select a small, sturdy pot about the size of a clenched fist or only slightly larger.

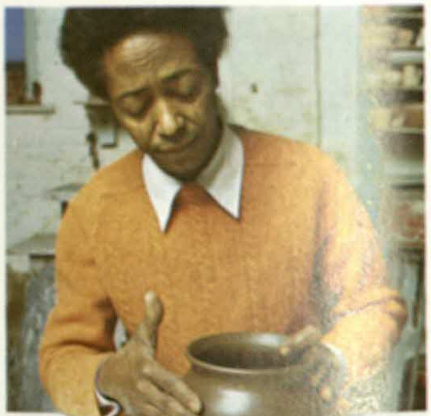
Right: burnished and slip decorated bowl and covered pots by John Ablitt. Large burnished vase with intricate incised decoration of straight and curving lines designed by Noreen Smith.



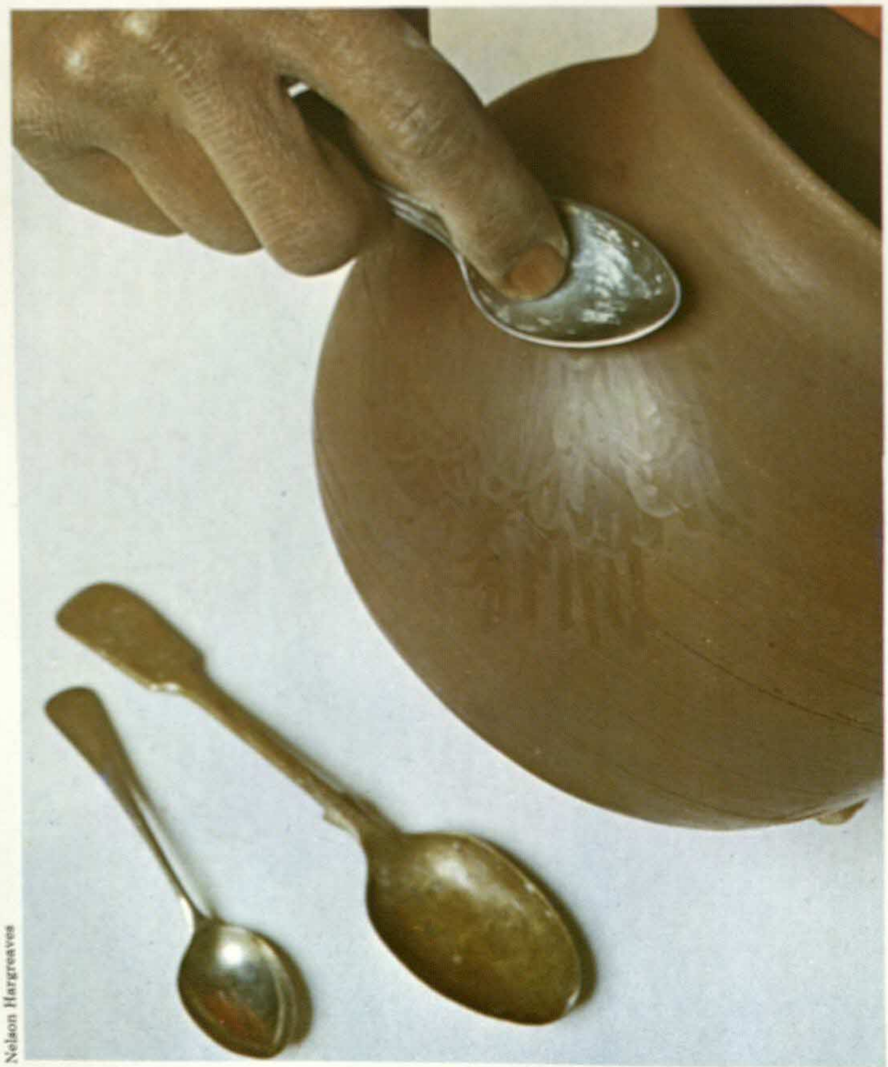
The completed design has affinities with a traditional Sudanese coffee pot.



2. *Work right over the pot in a slow, circular motion as the shine builds up. The process should be thorough.*



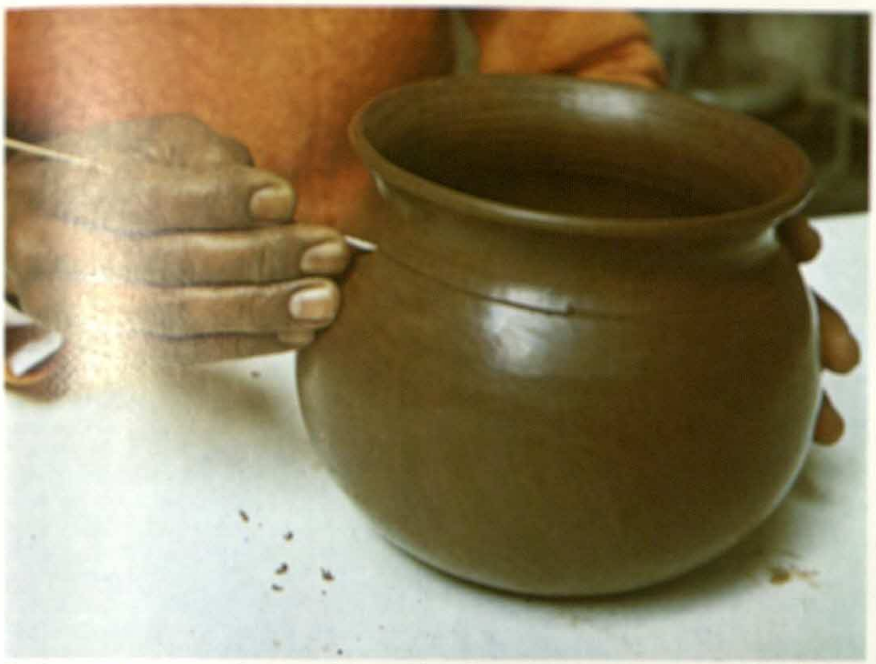
3. *Finish off the polishing with tips of the fingers, working gradually round and round to achieve a high shine.*



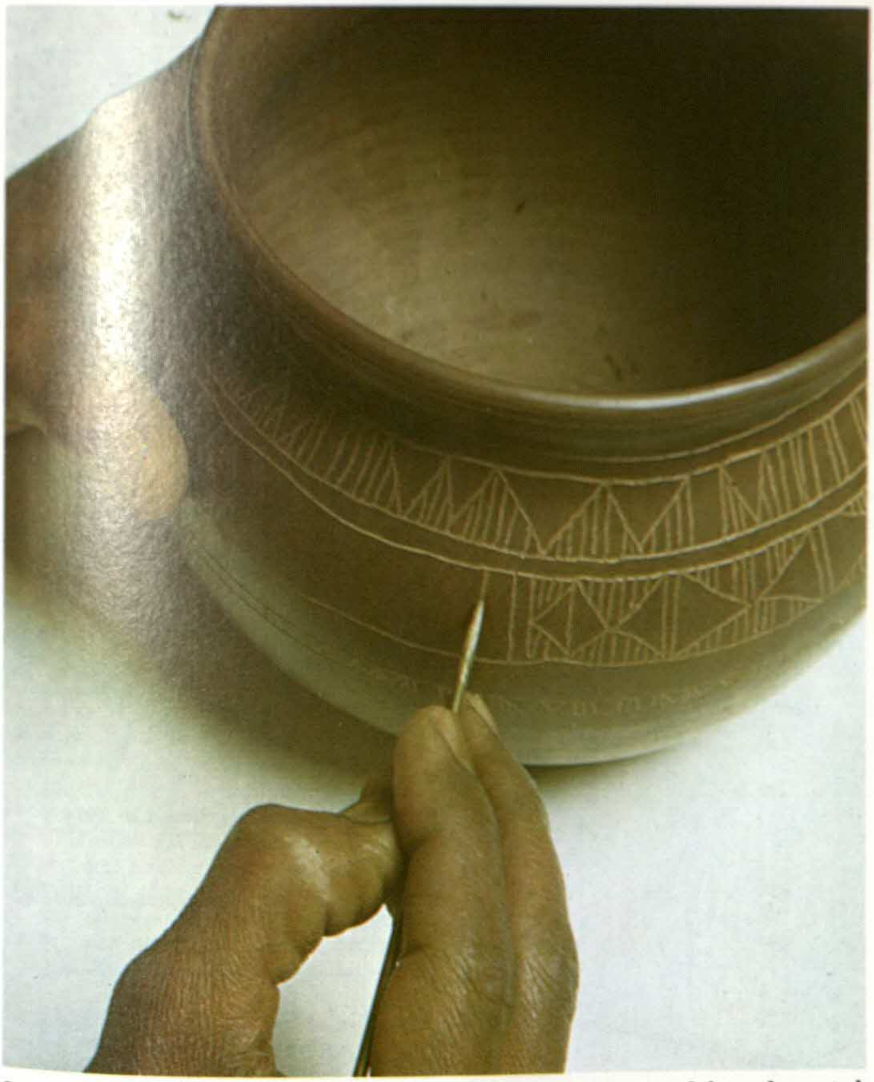
Nelson Hargreaves

1. *Using the back part of an old spoon, begin to polish the surface of the clay.*

4. *Here the completed bowl has a beautiful burnished effect, rich and warm, ready for the next stage of decoration.*



5. *Leave the pot to dry out thoroughly, then begin to scratch out the design.*



6. *Geometric designs combine well with smooth, shiny areas left undecorated.*

The essence of burnishing is that it is a slow, gradual process of building up a shine—rather like waxing a piece of new wood. Although it can seem tedious, the finished effect is well worth the effort, so it is worth beginning with a small item.

The clay should be allowed to dry out until it is about the consistency of thick, supple leather, and this is called the leather-, or cheese-hard, stage. Beyond this stage burnishing becomes progressively more difficult and you may begin to scratch the surface rather than burnishing it.

☐ Let the pot rest comfortably in one hand, and with the back of a teaspoon begin to rub the surface in a small, circular motion (fig.1).

☐ Work right over the surface of the pot, then repeat the process. Gradually a shine will begin to build up (fig.2).

☐ Continue rubbing as the clay stiffens, working all over the pot from ten to fifteen times until the clay appears to be drying beyond the leather-hard stage, and the pot is smooth and shiny.

☐ Then finish off by rubbing the pot with your fingertips (figs.3 and 4), pressing hard enough to make a squeaky sound.

Leave the pot to dry before applying any further decoration.

Sgraffito decoration

☐ Traditionally, a design is scratched on the surface of burnished pots with a pointed instrument—a technique known as sgraffito. Potters generally use a blunt metal tool, but a large darning needle or bodkin is equally suitable (fig.5).

☐ Plan your design before beginning to scratch it out. It is worth remembering that a contrast between matt and shiny surfaces looks most attractive, and that areas of parallel lines and cross-hatching can be combined with areas left smooth and shiny (fig.6).

Geometric designs are simpler to execute, and are more effective than flower or leaf shapes, for example.

Work slowly, and be careful to blow away surplus dust rather than brushing it as this could scratch the surface.

Firing the completed pot

When the pot is complete, put it aside carefully to dry out thoroughly. When you are ready for a bonfire firing, handle and stack the pots in your 'kiln' with the utmost care, remembering that this kind of surface decoration is very sensitive to the touch.

After the firing, the clay will have become pottery, but it must still be treated with care because items fired at these low temperatures tend to be brittle and fragile. Use your burnished and scratched pots as decorative items rather than for hard domestic ware.

Creating stained glass effects

Glass 3

The most attractive thing about the use of glass as a medium for artistic expression is its transparent quality—it is even more exciting to use if the glass is coloured. Stained glass has been employed for centuries to create lovely effects such as light shining through different colours of glass to point out a design or to make a bright shaft of colour in a room.

Traditional stained glass work involves using small pieces of differently coloured glass and joining them together with strips of lead to form designs. But now that there are several transparent glass paints available you can create the effect of stained glass without the expense and difficulty of both cutting and leading glass. There are also materials which simulate the effect of traditional leading. So you can decorate a flat piece of glass to make a panel, a chopped bottle for a candle-holder, a large beaker for a flower vase or any glass object which you want to enrich. With these new materials stained glass work has become a craft which everybody can learn.

Materials for painting

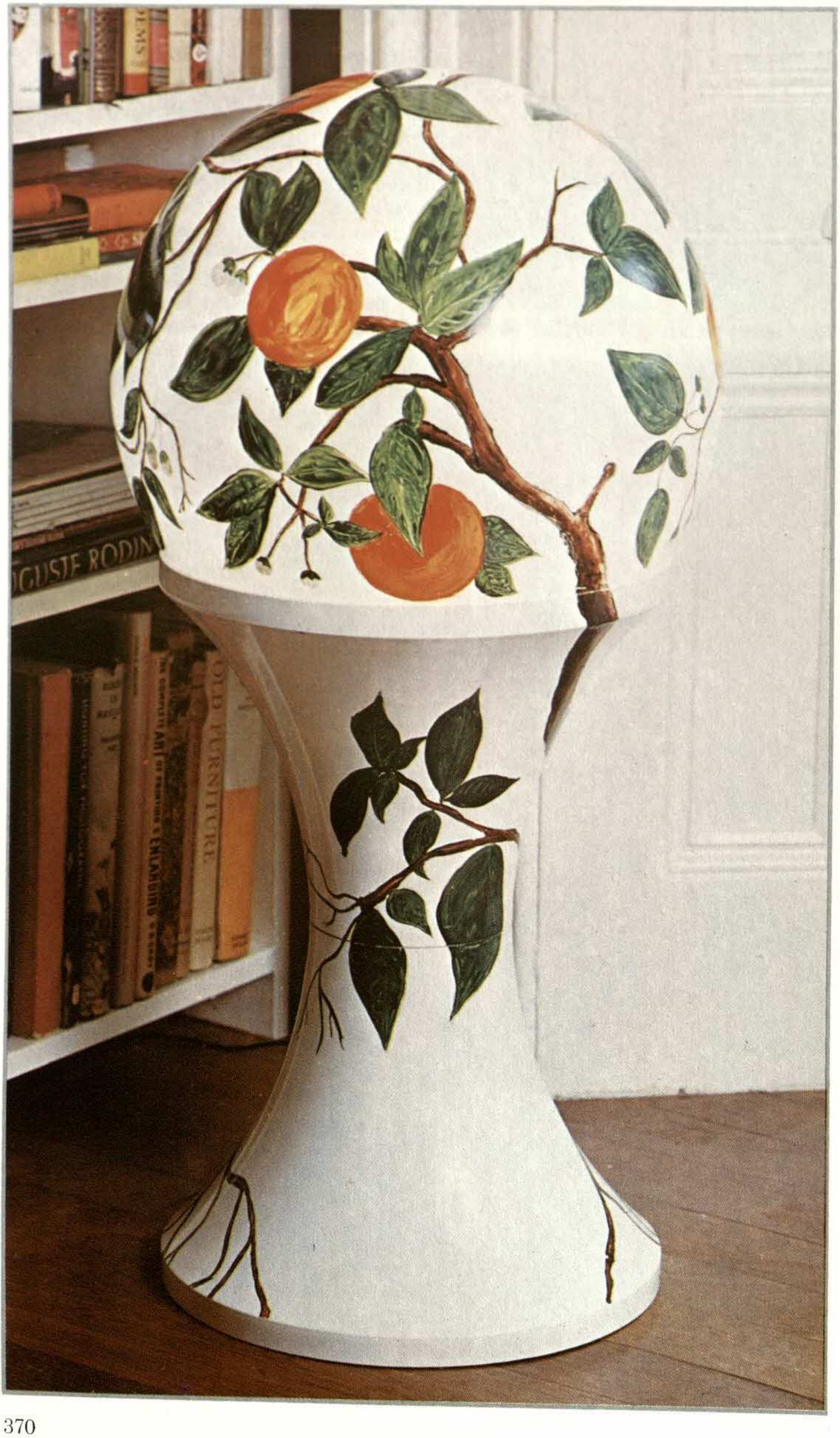
The essential materials for creating stained glass effects are the paints and the 'leading'. These can be bought from craft shops, either separately or together in kit form.

Paints made by the same manufacturer can usually be mixed together, but do check this before buying them. If they can be mixed you may prefer to buy the primary colours (red, yellow and blue) and make different hues yourself. The essential property of these paints is that they are transparent and will adhere to glass.

Artificial leading. One type is in tube form, like an oil paint, which is squeezed out where the lines are needed, and takes an hour or so to harden. This gives a very dark effect, as illustrated on the right.

There is another type of artificial leading which is like a putty and comes in two parts which have to be mixed. This is used in the next chapter.

To apply this type you have to mix it into a ball, roll it out into a long, thin tube and place it in position. It hardens in about three hours. Brush lampblack over the putty to darken it to the colour of lead. (Lampblack is available at most hardware stores.) The final result is very impressive, almost indistinguishable from traditional lead, but it requires more effort than the 'tube' type and is not so widely available.



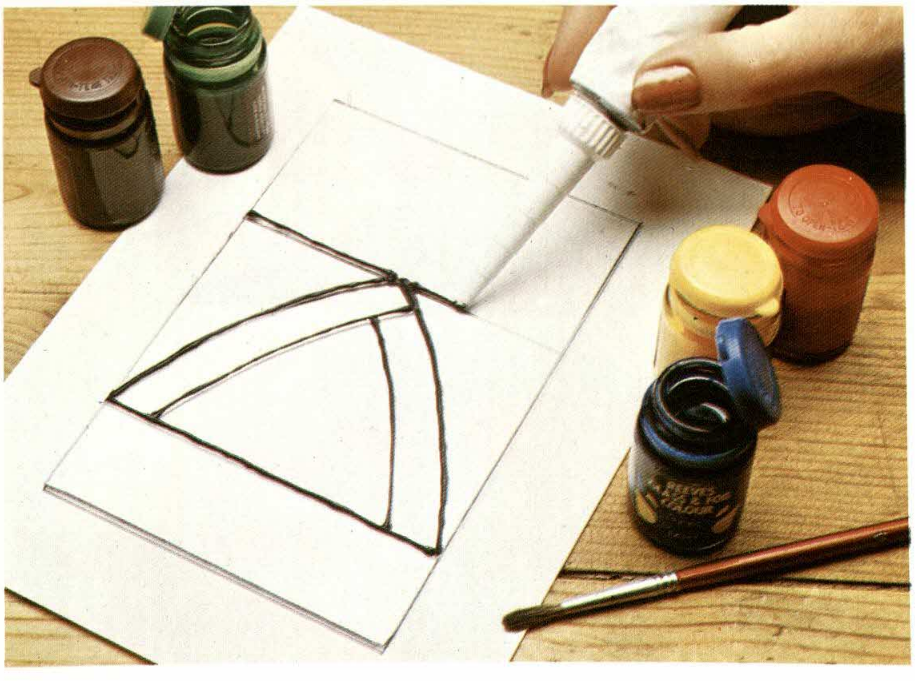
Steve Bicknell

Paint a round glass lampshade and introduce soft, moody lighting into your living room or any other room in the house. Designed by Karina Sterry.

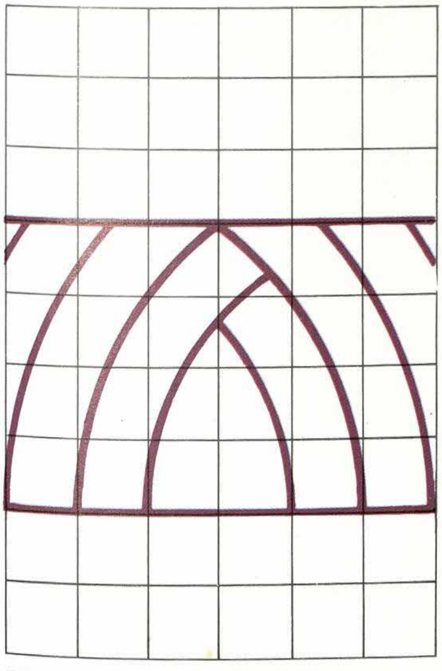
Camera Press

Above: paint your candle holders or table lanterns for a colourful display.

Below: draw a design on paper, place under the glass and trace with 'leading'.



Iain Reid



Trevor Lawrence

This design, suitable for glass painting can be enlarged on graph paper.

Whichever materials you use, do practise on some scrap glass first—a jam-jar or a small piece of window pane glass will do. Once you have mastered the technique you can start putting your own ideas into effect.

To paint a glass surface

You will need:

Glass paints and glass.
Leading.
Small brush and paper for design.
Polyurethane varnish (optional).

☐ Draw the design you want to paint on a piece of paper, the same size as the finished object. You can make up your own design or copy one from elsewhere, but the most effective designs are usually made up of small segments. Too large an area of one colour means that you run the risk of the colour being uneven, although as you become more experienced, you may want to create a mottled effect.

☐ Thoroughly clean the glass to be decorated with warm water and detergent. If there is any grease on the surface the paint will not adhere properly. Rinse and dry the glass, taking care not to touch with your fingers the surface to be painted.

Decorate a glass panel with this cheerful fish or paint a complete aquarium. Designed by Reeves Ltd.

☐ Tape the piece of paper with the design drawn on it to the back of the glass, so that you can see the design through the glass. Lay the glass on a flat surface.

☐ Check the manufacturer's instructions for the 'tube' leading, which comes with a nozzle at the end of the tube. Cut the nozzle at different places to give different thicknesses—the nearer to the base the nozzle is cut, the wider the hole will be and the thicker the line of leading. Make the first cut near the top of the nozzle; you can always cut again for a thicker line.

☐ Trace the lines of the design with the leading. Hold the tube at a slight angle to the glass, with the nozzle lightly touching the glass, and squeeze gently and regularly as you draw the nozzle along the glass. Avoid resting your hand on the glass. If necessary, wear cotton gloves or put a piece of clean fabric under your hand to avoid getting grease from your skin on to the surface.

☐ After each line has been drawn, clean the nozzle with a pin before starting a new line. Be sure that the leading is free of holes and gaps and that it touches the glass wherever you intend it to.

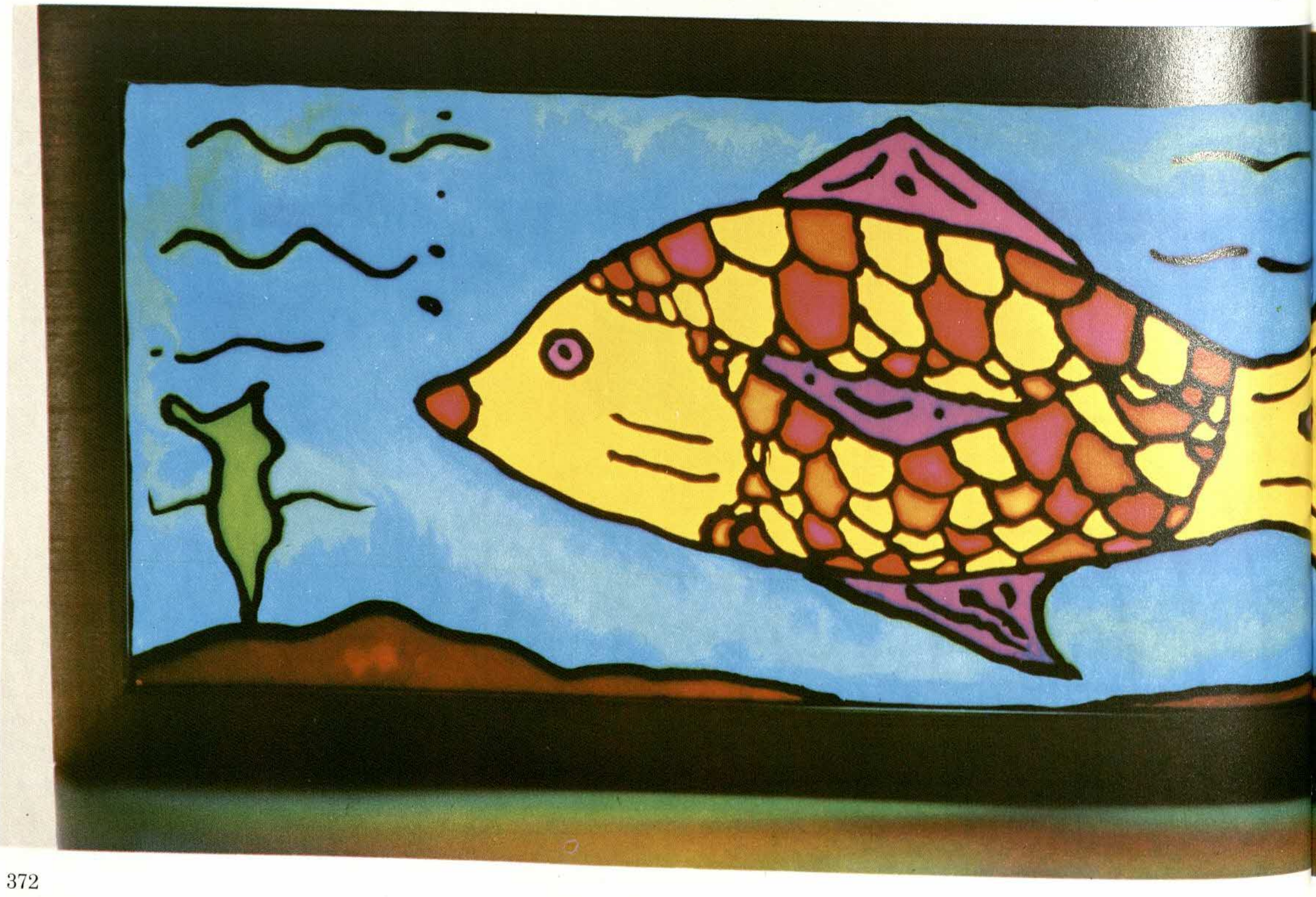
☐ If you want the leading to lie flat, smooth it down gently with your fingers before it is quite dry—about 15 minutes after application. At this stage you can use a match-stick or spoon handle to push the leading over the glass to even out any irregularities.

☐ If you want to thicken the line without cutting the nozzle further, hold the tube in a vertical position and squeeze slightly harder, but still with even pressure. This will increase the flow and thicken the line.

☐ Leave the leading to dry for an hour before starting to paint.

☐ Take the sheet of paper away from the glass. When painting it is important to be able to see right through the glass or it is impossible to judge how transparent the colours will look. So put some white paper down on your working surface, to give a reflective background, and raise the glass about 15mm ($\frac{1}{2}''$) above the paper by resting it on small blocks. Keep the surface of the glass as level as possible to reduce the risk of the paint running.

☐ Mix the paint according to the manufacturer's instructions—some paints may only need to be shaken before application, others need to be shaken and then diluted with one part of water to two parts of paint. If the paint has to be mixed, be sure to get the proportions right—if the paint is too thick, it will be difficult to cover the glass evenly; if the paint is runny, it will tend to pull away from the leading



and concentrate in the centre of each area of paint.

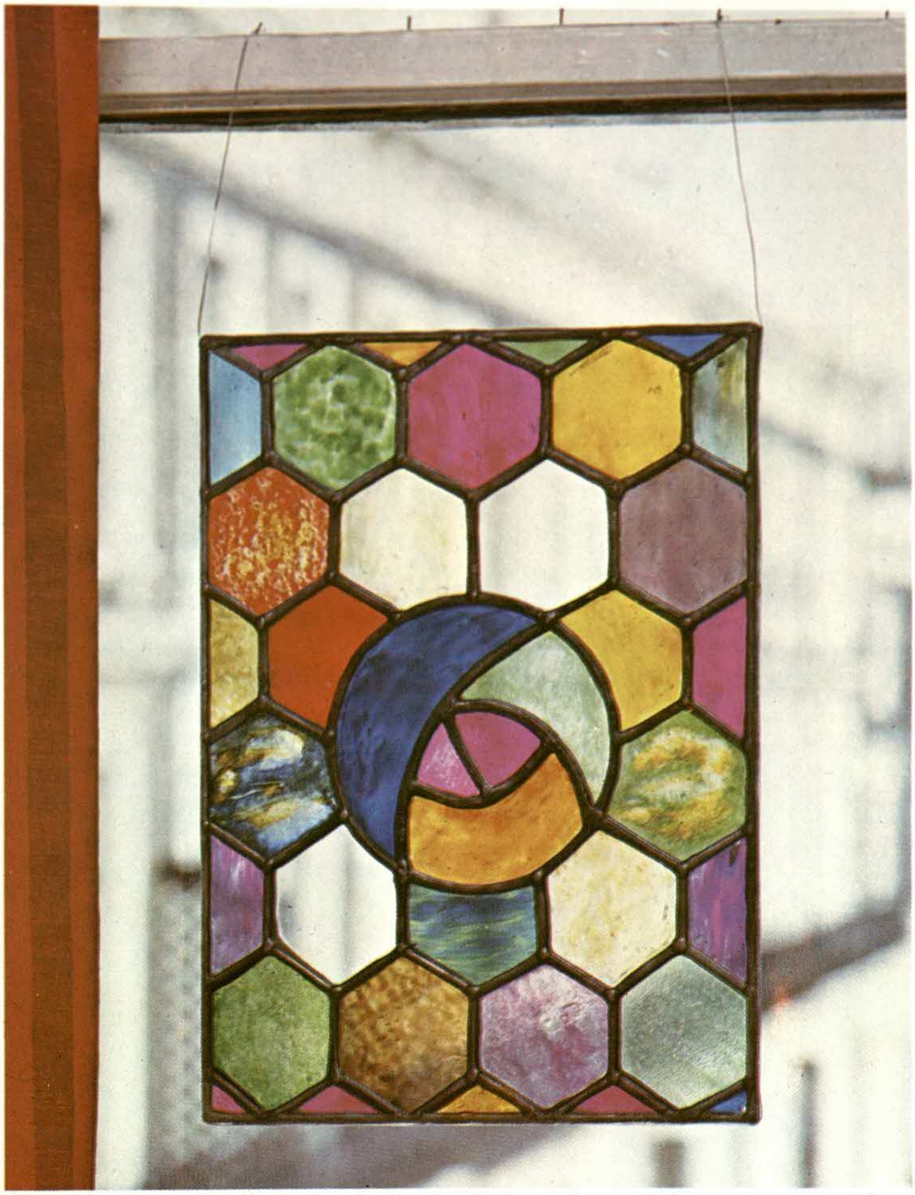
☐ Apply the paint by letting it flow from the brush, rather than using vigorous brush strokes. If the paint is of the right consistency, it should level itself off into a smooth coat. The more paint you put on the deeper the colour will be because less light is allowed through.

Let the paint dry for at least three hours before handling it, or before putting another coat over it if you feel the colour needs to be deeper.

You can experiment to get a rippled effect by putting on a very thin coat and waiting until it is tacky. Then dab on little dots of colour to give deliberately uneven colour.

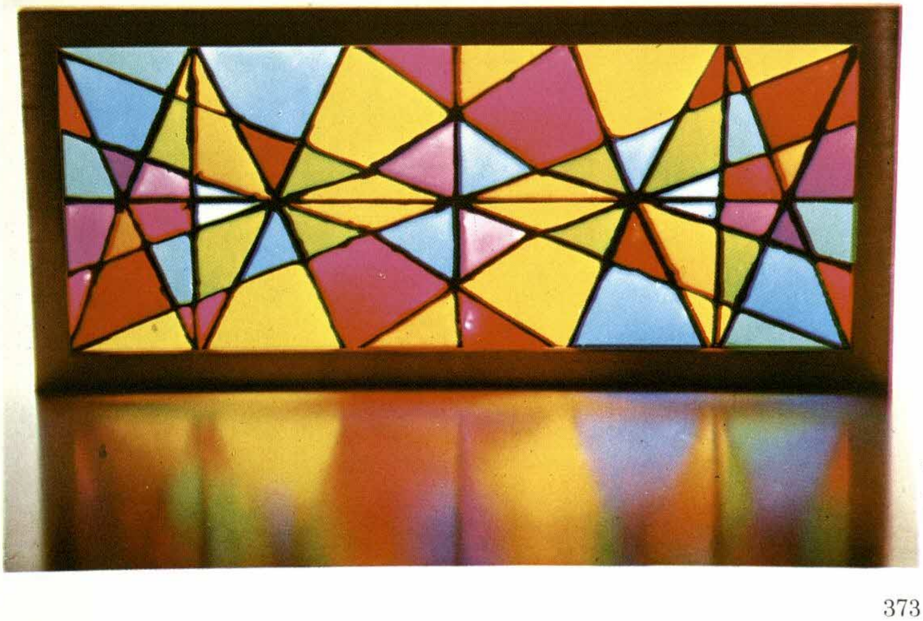
☐ Clean brushes thoroughly with warm water and detergent immediately after use. Rinse them in cold water.

Finishing. Paints sold for painting on glass are usually water-resistant, so that the painted surface can be cleaned *gently* with cold water. But for a more durable finish, especially if the glass will be in a steamy atmosphere, such as a kitchen or bathroom, coat the surface with a polyurethane-based clear varnish. Make sure the paint is completely dry before you apply this. The varnish will probably add a yellow tinge to the colours, so test it on a scrap piece before using it.



Above: hang a painted window in front of a plain one, and change your view. Designed by Craft Materials Supplies.

Below: glass paints are very versatile—go abstract with a brightly lit panel. Designed by Reeves Ltd.



Steve Bicknell

Yarns and fabrics for weaving

Yarn — weaving 5

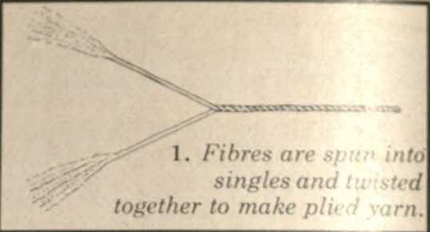
Materials which are suitable for weaving can be found in a much wider range than is suggested by the yarn suppliers' list. Almost any substance which is obtainable in a long flexible length, as well as the yarns which are designed for the purpose, can be used for weaving, and it is fascinating to assess practically any material in terms of its potential use in this craft. For instance, sheet materials such as cloth can be cut into strips, and even paper can be used in many different ways.

Fibres

Most weaving materials are made of fibres and some of these are more suitable than others for certain types of work. The properties of each material have to be carefully considered for satisfactory results.

A yarn is made by twisting many individual fibres together (the twist adds strength) and the resulting 'singles' yarn can then be plied or twisted with similar singles to form a two-, three- or more ply yarn (fig.1).

The fibres from which yarns are made include vegetable fibres (cotton, linen, jute, sisal), animal fibres (wool, silk) and man-made fibres. Each of these raw materials can be made into many different types of thick or thin yarn, twisted tightly or softly into a smooth or textured thread. For example, sometimes even a silk thread can be unrecognizably dull-looking and rough because of the type of silk fibres chosen and the way they have been spun into a thread. A yarn, therefore, cannot be described by its fibre alone. Its behaviour and appearance will depend not only on its fibre but also on the way in which it has been spun into a yarn.

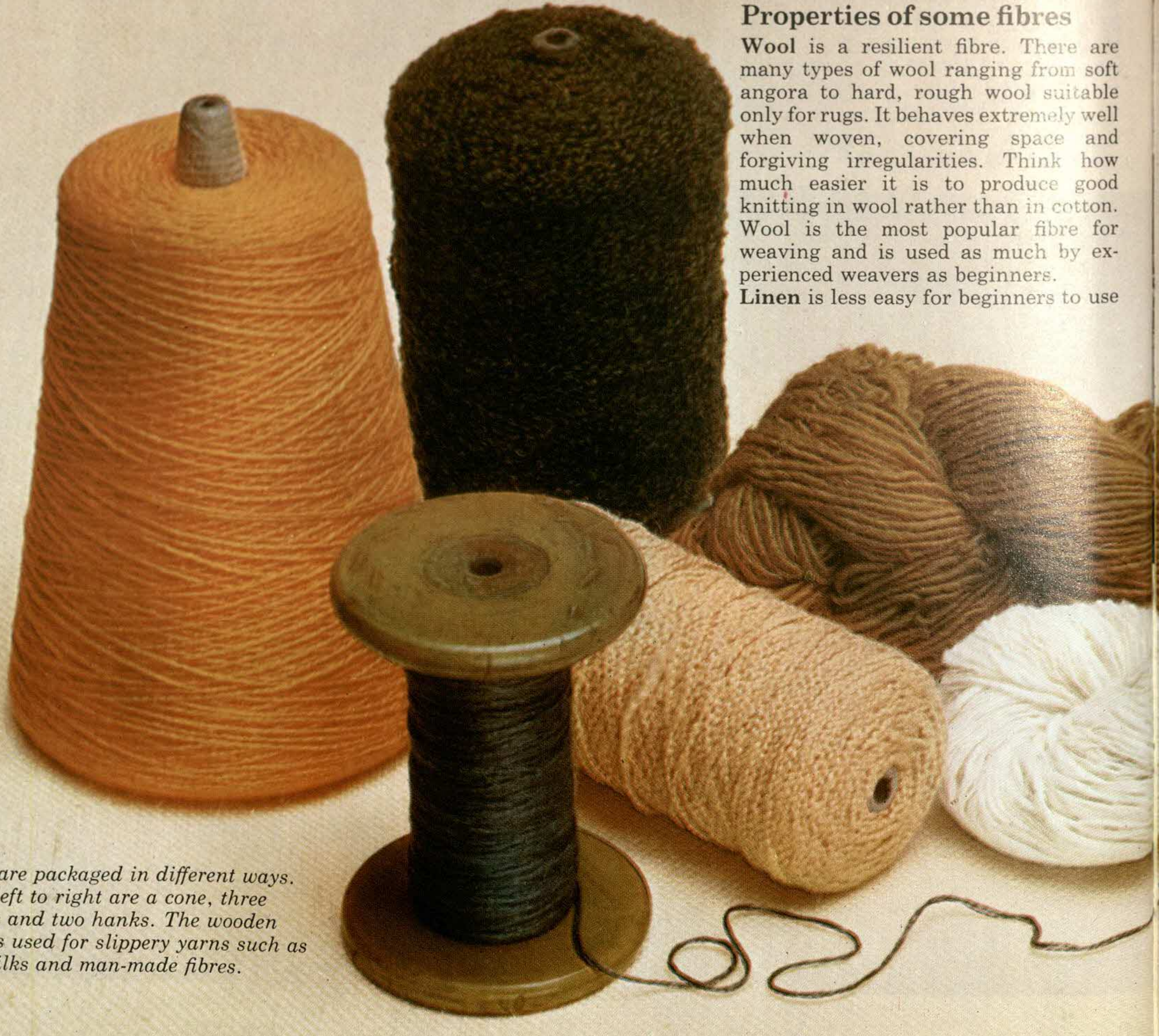


1. Fibres are spun into singles and twisted together to make plied yarn.

Properties of some fibres

Wool is a resilient fibre. There are many types of wool ranging from soft angora to hard, rough wool suitable only for rugs. It behaves extremely well when woven, covering space and forgiving irregularities. Think how much easier it is to produce good knitting in wool rather than in cotton. Wool is the most popular fibre for weaving and is used as much by experienced weavers as beginners.

Linen is less easy for beginners to use



Yarns are packaged in different ways. From left to right are a cone, three cheeses and two hanks. The wooden spool is used for slippery yarns such as some silks and man-made fibres.

Steve Bicknell

as a warp because it is affected by the moisture in the air and this makes it difficult to keep the tension even. Two-ply linen is easier as a warp than 'singles' which is only suitable for very experienced weavers. Linen is hard-wearing and cold to the touch.

Cotton is easy to use, is absorbent, launders well and comes in a good range of colours.

Silk is more suitable for experienced weavers as it needs extra care in handling. It is also expensive and difficult to obtain.

Man-made fibres. Many of these lack elasticity and need careful handling. If possible, it is better to avoid man-made fibres until some experience has been built up in handling yarns.

Buying yarns

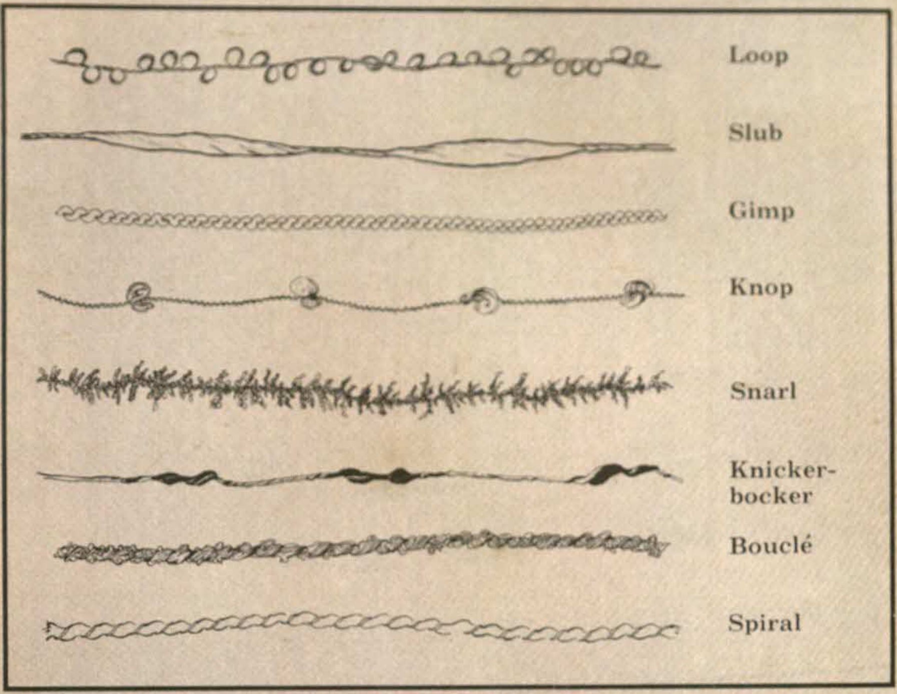
Some of the yarns which can be bought from wool shops are suitable for weaving, but the majority of knitting wools look 'soapy' (soft and uneven) when woven as they have a different twist to weaving wools. Knitting cottons, however, can be used, as well as fancy yarns such as Twilley's Bubbly and Goldfingering.

Hardware shops often sell a good range of strings and twines in many different fibres.

Stationers stock coloured parcel and gift twines, sometimes even legal ribbons. Binder and baler twines can be obtained in agricultural areas and garden shops, and chain stores are always worth a visit.

All sorts of sheet materials, plastic and cloth, are widely available.

The majority of materials for weaving, however, have to be bought by post. Suppliers will send samples (some charge for these) and a price list. A minimum order of 100gm or 200gm (¼lb or ½lb) is usual, except for metal threads and 'specials'. Some knowledge of textile and yarn terms used is necessary in order to use the suppliers' lists effectively.



Gwen Simpson

2. *Some of the fancy yarns that are available to the weaver for textural interest in the weft.*

Yarn terminology

Ply does not denote thickness but the number of singles strands of twisted fibres which are twisted together to make the yarn. For instance, two-ply yarn consists of two strands twisted together and may be a thicker yarn than a three-ply composed of three thinner strands.

Fold. Another word for ply (two-fold).

Singles. One strand only, not plied. Suitable for weaving lengths of cloth, especially tweeds, as it imbeds itself with other singles yarns to form a firm fabric. Not suitable for warp yarns or for beginners because it breaks unless handled expertly.

Count. A system of numbers applied to yarns to denote thickness and, therefore, yardage per kilogram (per pound). When a stroke appears between two numbers, one of them, usually the smaller, denotes the ply of the yarn. This may be written 2/12s or 12s/2, for example, to indicate a two-ply yarn of a particular thickness. The count system varies from fibre to fibre and from region to region.

Cheviot, Harris, Welsh. Types of wool fibre particularly suitable for tweeds. Harris wool is not suitable as a warp yarn or for beginners as it is too hairy. The projecting hairs catch together when weaving.

Mercerized. A process which gives a permanent lustre to cotton.

Grey. This refers to the natural colour of cotton and sometimes other fibres. It is not grey in colour but a soft, creamy-white.

Mohair. A type of wool with long, glossy fibres which comes from the angora goat. Mohair loop yarn can be brushed after weaving to give the familiar light, fluffy finish.

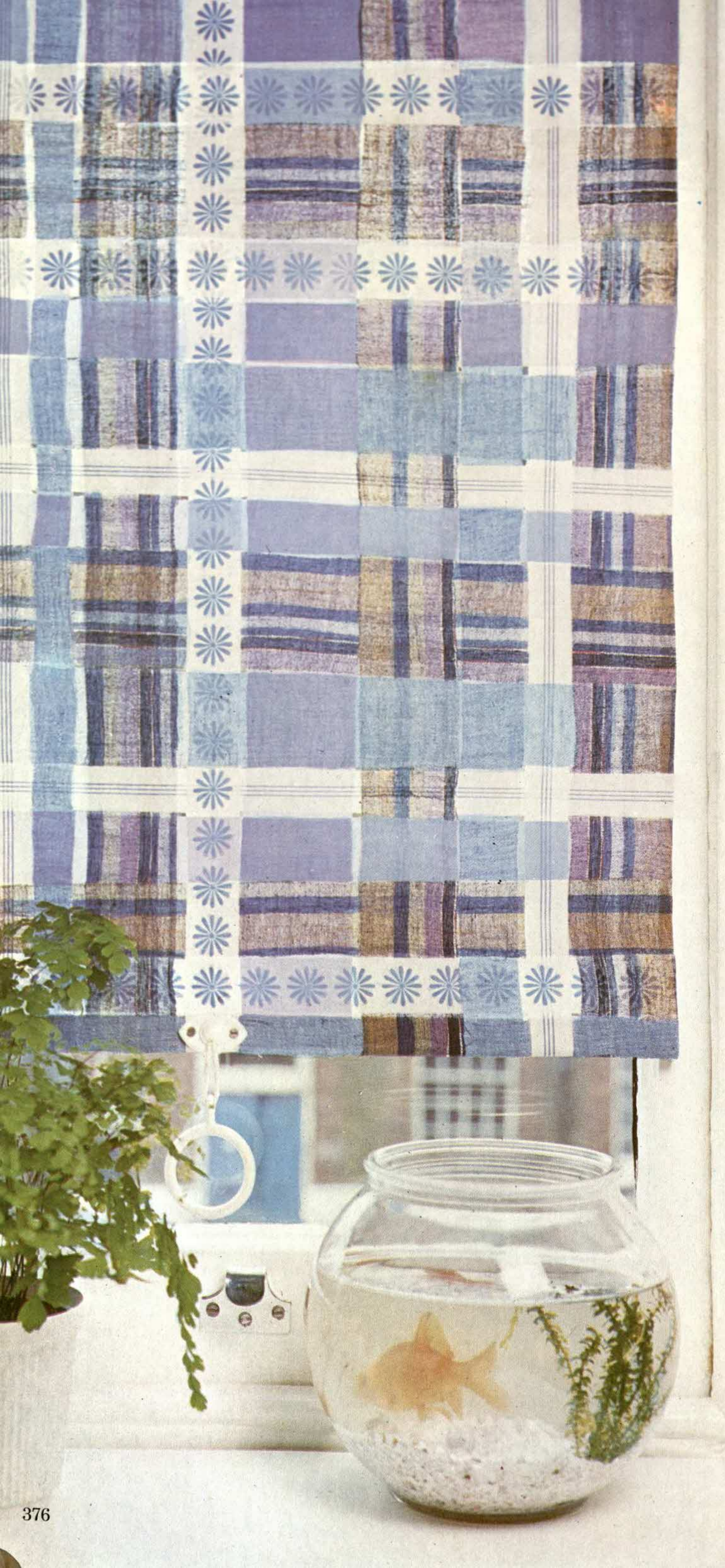
Worsted. A way of spinning fibres, always wool unless otherwise stated, to give a smooth yarn.

Woollen. Wool fibres spun together to give a hairy yarn, unlike worsted.

In oil. Wool yarns often have a lanolin dressing to prevent them from fluffing during weaving. The lanolin is washed out after weaving.

Gimp, bouclé, knop, slub, snarl, spiral, KB, loop. Different types of fancy yarns suitable for weft (fig.2).

Cheese or spool, cone, hank or skein are various ways in which yarn



is packaged. Hanks will be free from tangles on arrival, but need very careful handling. Do not remove the 'ties' until the hank is stretched out ready to be wound into a ball. Use two hands or a chair back if a skein-winder is not available. Never attempt to use yarn direct from the hank: always wind it into a ball first. Alternatively, use the sort of ball-winder which is sold for knitting machine users.

A cheese is meant to be supported on a horizontal rod for easy unwinding, but it can be put on a large nail hammered through a board, or held in a straight-sided jar on the floor.

A cone can stand on the floor without support.

Sometimes it is possible, and more convenient, to pay just a little extra to have the yarn packaged differently from the way in which it is advertised. If it is sold in a hank, then it can be wound on to a cheese or on to a cone. If sold on a cheese it can be wound on to a cone. If, for instance, it is sold in a 1.9kg (2lb) cone, it can be wound on to eight 100gm ($\frac{1}{4}$lb) cheeses.

Sett. No yarn, no matter how suitable for its purpose, will give a good result unless the right spacing is chosen for the warp threads. Sett is the term used for the number of warp ends per 2.5cm (1"). A useful guide is to wind the warp yarn carefully around a ruler, making sure that the threads lie comfortably touching, side by side. Count them over 2.5cm (1"). Two-thirds of that number of threads is approximately the right sett for that yarn, depending on the weave to be used. This is the general rule for normal weaving, but it does not apply to tapestry weaving or rugs. Some yarns are not suitable for use in the warp. If in doubt, the supplier will usually advise you.

To make a window blind

This decorative window blind is woven with strips of cloth and reinforced with PVA adhesive.

You will need:

13mm ($\frac{1}{2}$") thick insulation board slightly larger than the finished blind is to be (available from builders' merchants).

Polythene sheeting to cover the board.

Cotton or rayon fabric.

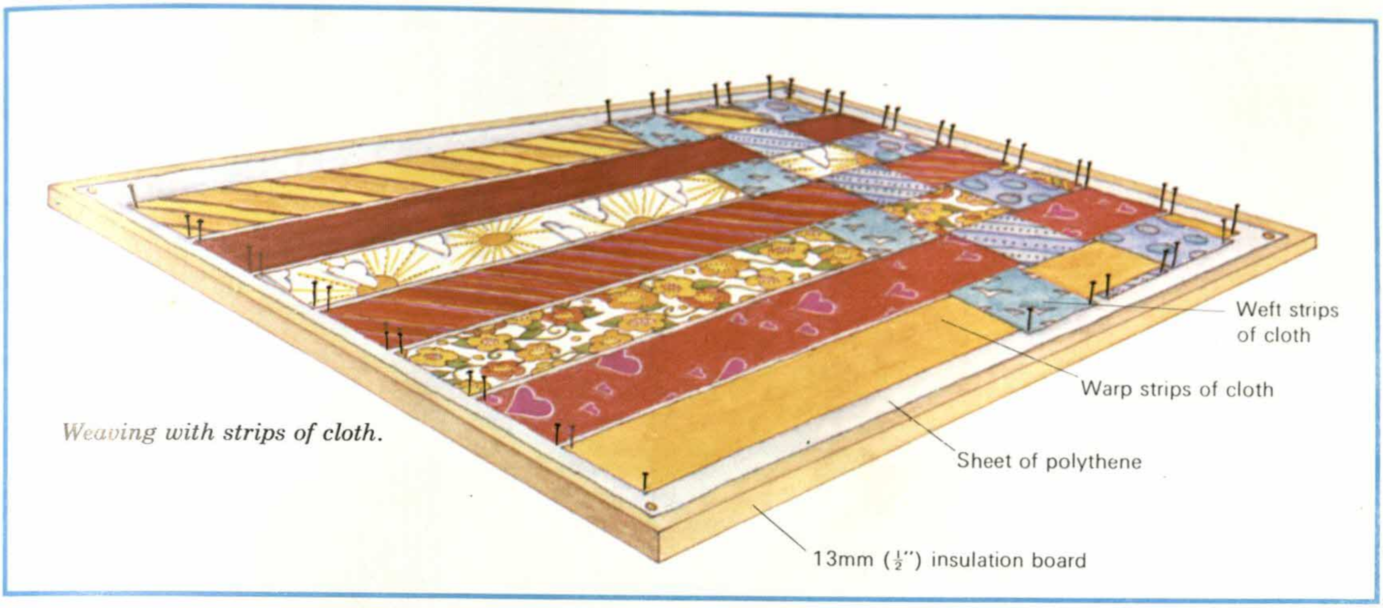
Pins.

Plastic sponge.

PVA adhesive. PVA is obtainable as Unibond in hardware shops and should be bought in a plastic container. If it comes in a tin it tends to oxidize and can discolour the cloth.

Alasdair Ogilvie

A cloth weaving being used as a window blind. Mats, cushions, decorative panels and many other objects can be created by weaving with cloth strips. Designed by Ann Sutton.



Weaving with strips of cloth.

Gwen Simpson

☐ Stretch the polythene sheeting over the insulation board and secure with pins.

☐ Using lightweight fabrics such as cottons, viscose or acetate rayons (but not wool, velvet or other man-made fibres) cut or tear strips of up to 7.5cm (3″) wide and the same length as the board. If thin enough fabrics are used, the blind can be mounted on a roller kit, but refer to the instructions with the kit to check size of the woven fabric required.

☐ Pin out the strips of cloth on the board side by side, with no gaps. When enough strips have been pinned out for the required width, cut or tear more strips for the weft.

☐ Darn each weft strip in and out of the warp strips, keeping them flat and pinned taut at each end.

☐ When the weaving is complete, make a solution of PVA and water. Slowly add 2/3 water to 1/3 PVA, whisking together all the time to blend thoroughly.

☐ Apply this solution liberally to the weaving with a piece of plastic sponge (if this is rinsed out immediately in cold water it will not become stiff). Although the solution looks like milk when applied, it will dry clear.

☐ When the weaving is saturated, take some kitchen paper towelling (preferably white) and mop up as much excess moisture as possible.

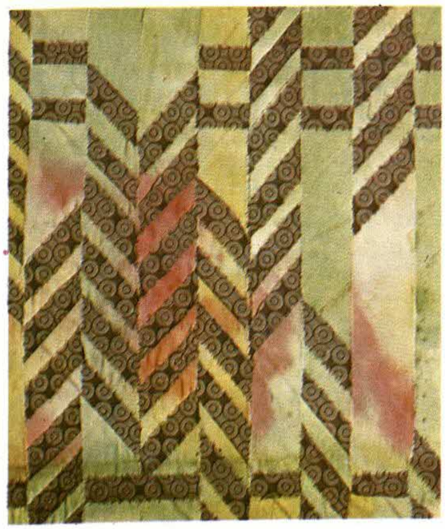
☐ Leave to dry flat. If it has to be dried vertically, make sure that the floor is protected.

☐ When completely dry, the blind can be carefully peeled off the polythene-covered board and can be trimmed to size without fear of fraying.

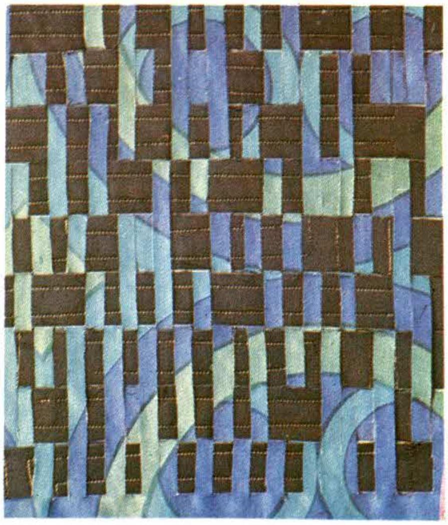
Some fabrics become translucent with this process and some will darken. It is wise to test small pieces first if discolouration is likely to be a disadvantage in the finished blind.

Roger Phillips

Cloth weaving, using insulation board as a loom. Designed by Rosemary Ritchie.



The dark fabric has been woven both horizontally and diagonally across the warp strips. Designed by Charles Collin.



Roger Phillips

Parallel slits were made in this fabric and black pieces of weft were woven into it. Designed by Fiona Webster.

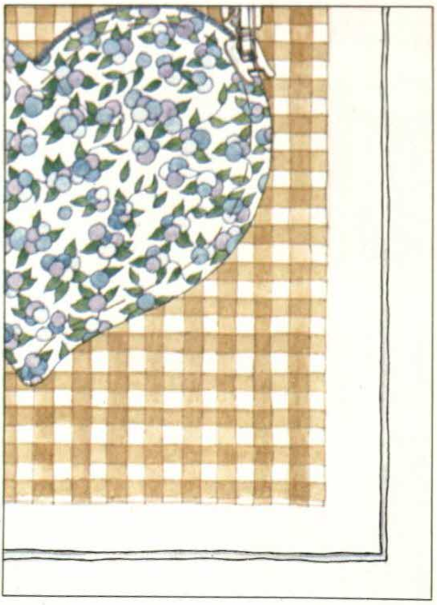
Machine worked appliqué

Cloth — appliqué 3

Machine stitched appliqué has the advantages of being hard-wearing, practical for most fabrics and time-saving. Motifs can be reinforced with iron-on, non-woven interfacing in the same way as for hand sewn appliqué. A fusible web, such as Bondaweb, can be used similarly.

Zigzag stitch. If your machine can work a zigzag stitch you will find this invaluable. An open zigzag stitch can be worked round the raw edges of any closely woven fabric or felt motif.

Satin stitch by machine. If you close up the zigzag stitch sufficiently you can achieve an effect like fine, smooth satin stitch that is worked in half the time taken to achieve the same effect by hand. This is ideal for securing and decorating the edges of motifs in one operation. Satin stitch is best worked with a No.50 sewing thread and a frame to keep the fabric taut, or place the work on two sheets of thin paper when machining to avoid puckering (fig.1)—the paper can be easily torn away afterwards.



Gwen Simpson

1. *Working satin stitch by machine. The background fabric with motif tacked to it is placed on two sheets of thin paper.*

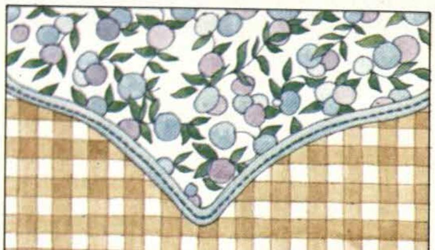
It is well worth while spending some time experimenting with stitch lengths and widths and learning how to sew accurately round angles and curves. The stitch-and-cut method (see Appliqué chapter 2, page 350) can be worked using this machined satin stitch.

Straight stitch. Alternatively, appliqué can be sewn to the background with straight machine stitching. In this case, unless you are using felt, leather or PVC, a small turned-under hem must first be tacked round the edges of the various parts of a motif. Treat corners and curves as you would hand sewn appliqué when using the turned-under method.

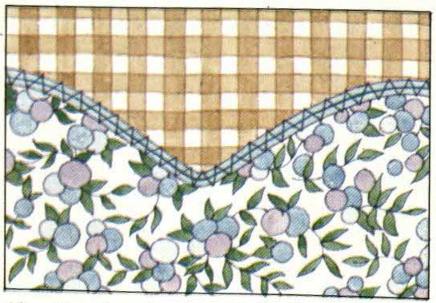
Ric-rac braid provides a quickly-produced decorative edge on simple appliquéd shapes. Neaten edges of the shape with open zig-zag stitch or oversew edges by hand and tack to the background. Tack the ric-rac into position and secure with straight or zigzag machine stitching down the centre of the braid.

Where ric-rac is used to cover adjacent edges of a motif, these edges should be overlapped by 3mm ($\frac{1}{8}$") before the ric-rac is tacked into place.

Russian braid, a narrow braid made up of two adjoining cords, makes an alternative decorative edge for motifs. Neaten the edges of the shapes as for applying with ric-rac braid, and secure braid with straight stitch worked between the cords (fig.2a) or with open zigzag stitch worked across the two cords (fig.2b).



2a. *A motif applied with Russian braid using a straight machine stitch.*

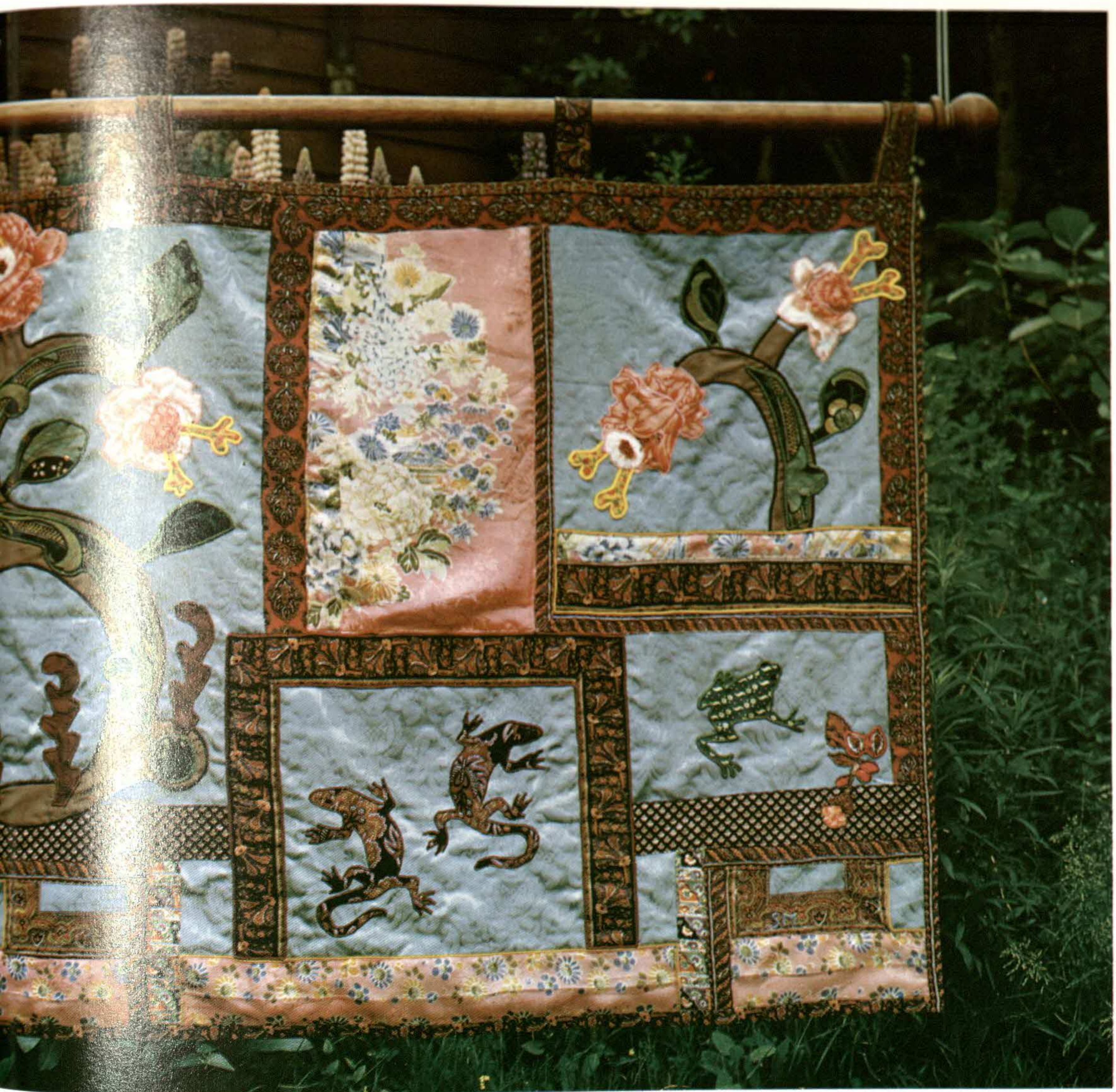


2b. *Russian braid stitched round a motif with a zig-zag machine stitch.*

Using printed fabric

Small motifs can be cut from spare pieces of printed fabric and applied to a plain fabric. You can cut individual flowers from the fabric used for a floral tablecloth and apply them to a set of plain napkins. You can also make appealing trimmings for children's clothes in this way.

Try to make a printed fabric work for you in a witty way. First cut out your motif shape in tracing paper and move



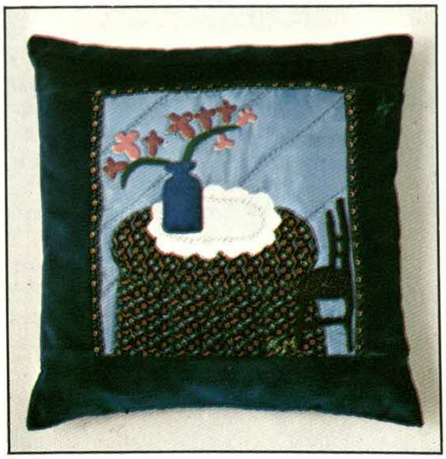
S. Maxwell/Crafts Advisory Committee

Exotic wall hanging with a feel of the East. Appliqué panels are combined to make up the hanging on which the designer has used fabrics which are sympathetic to her subjects. Both designs on this page by Susan's Cottage Industry.

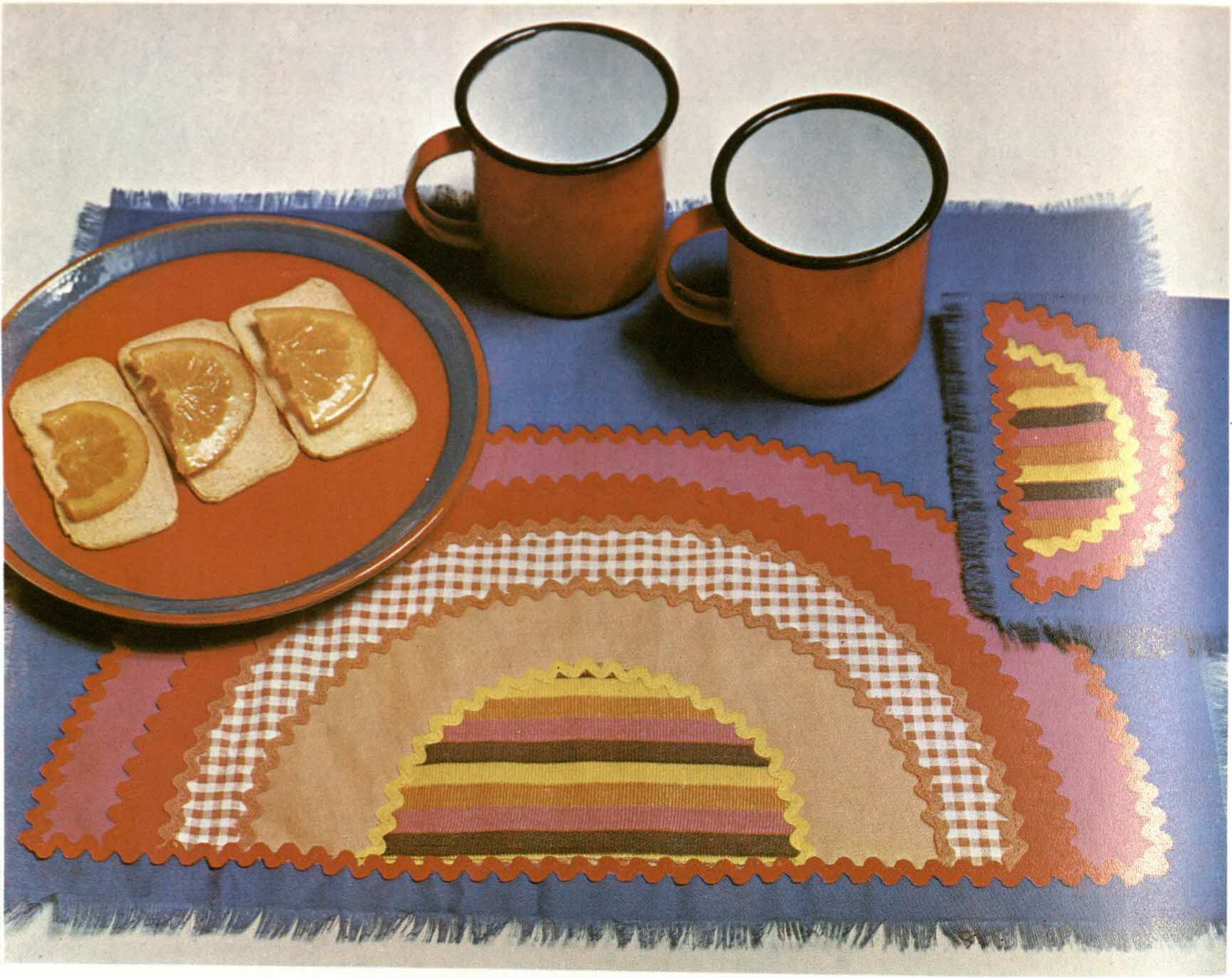
this around on the motif fabric until the details of the pattern are in the best position for cutting out. A spot can become the eye of a bird or animal, or a line of stylized daisies can march down the back of a seated cat.

Sympathetic use of fabric. Choose a print to harmonize with the subject of the motif—see how the designer of the cushion has chosen fabrics—a small all-over print for the tablecloth and an embossed one for the doily. She has used a leafy fabric for the leaves on the wall hanging and has made her lizards look more reptilian by the use of a fabric with an exotic design. Notice, too, that she has taken a floral fabric, cut out two separate flowers and applied them to the hanging, one on top of the other: with the addition of stamens this makes a flower which is unique.

One from a charming set of cushions. The appliqué is worked with a happy combination of hand and machine stitches. The texture, as well as the pattern, of the chosen fabrics has been carefully considered here.



Susan Maxwell


PAF International

A tablemat and matching napkin with sunrise appliqué motifs applied with ric-rac braids; the layers of fabric are superimposed one on top of the other.

Tablemats and napkins

Sunrise mat and napkin

You will need: (quantities given for one mat and one napkin in each case).

For mat: 45cm x 35cm (18″x14″) piece of linen cut on the straight of grain. For mat appliqué: 40cm x 20cm (16″x 8″) piece of pink cotton; 35cm x 18cm (14″x7″) piece of red cotton; 30cm x 16cm (12″x6½″) piece of gingham; 25cm x 14cm (9½″x5½″) piece of peach cotton; 16cm x 10cm (6½″x4″) piece of striped cotton. All pieces to be cut on the straight of grain.

Ric-rac braid: 1.8m (2yd) red, 90cm (1yd) peach, 45cm (½yd) yellow.

For napkin: 45cm (½yd) square of linen. For napkin appliqué: 20cm x 12cm (8″x 5″) piece of pink cotton; 16cm x 10cm (6½″x4″) piece of striped cotton, cut on the straight of grain.

Ric-rac braid: 60cm (⅝yd) red, 30cm (⅜yd) yellow.

Matching thread.

To make the mat. Enlarge the sunrise graph pattern so that the outer sunrise is 18.5cm (7⅜″) high (see Design know-how chapter 4, page 112). Make a pattern for the complete shape and patterns for each colour used.

☐ Fold linen for mat in half vertically and mark this central fold with a line of tacking.

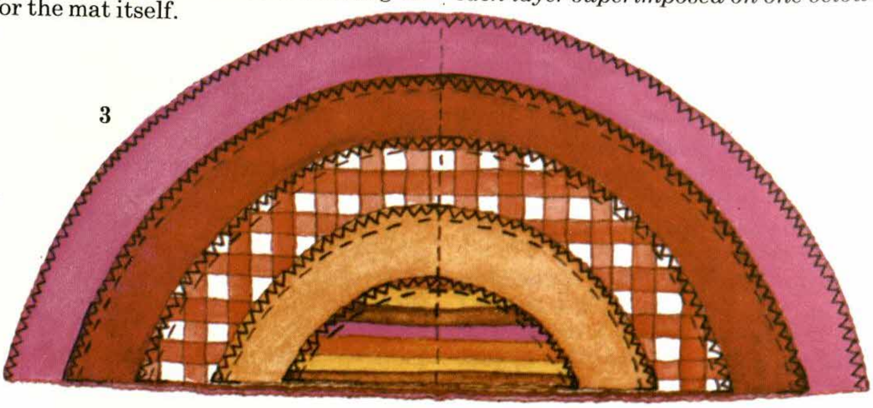
☐ Cut out appliqué pieces for mat in the colours shown in the illustration, placing lower edge of each piece on the straight of grain of fabric. Mark centre of each piece with a line of tacking as for the mat itself.

☐ Neaten the edges of each section as described earlier in this chapter.

☐ Matching central lines, tack sunrise sections together, superimposing one piece on the next (fig.3).

☐ Tack appropriate coloured ric-rac braid around all but outer band of sunrise so that raw edges of fabric are covered. Turn under 1cm (⅜″) of braid at ends to neaten. Sew in place with straight or zigzag machine stitching.

3. *Sunrise shapes tacked together, with each layer superimposed on one below.*


Gwen Simpson

☐ Position appliqué on mat, matching central lines, with lower edge about 5cm (2½″) up from lower edge of mat.

☐ Beginning at lower left hand corner and folding under end of braid diagonally, pin, tack and stitch ric-rac braid round outer edge and base of sunrise, making a folded mitre at the right hand corner (see Sewing chapter 5, page 265) and fold left hand end diagonally under to neaten.

☐ Make a 2.5cm (1″) fringe all round mat to finish (Sewing chapter 5, page 265).

To make the napkin. Adapt the sunrise graph pattern so that the sunrise is 10.5cm (4⅛″) high.

☐ Fold linen for napkin in half vertically and then horizontally and mark folds with lines of tacking.

☐ Make patterns and apply sunrise to napkin on lower left hand corner of napkin about 4cm (2″) from the edge, working the appliqué in the same way and applying it as for the mat.

☐ Make a 2cm (1″) fringe on all edges of the napkin.

Heart mat and napkin

You will need: (quantities given for one mat and one napkin in each case).

For mat: 48cm x 38cm (19″x15″) piece of linen cut on the straight of grain.

For appliqué: 40cm x 32cm (16″x12½″) piece of gingham cotton; 34cm x 28cm (14″x11″) piece of paisley cotton.

Ric-rac braid: 1.35m (1½yd) red, 1.15m (1¼yd) yellow.

For napkin: 45cm (½yd) square of linen.

For appliqué: 18cm x 15cm (7″x6″) piece of paisley cotton; 15cm x 13cm (6″x5″) piece of gingham.

Ric-rac braid: 70cm (¾yd) orange, 45cm (½yd) yellow.

To make the mat. Enlarge the heart graph pattern so that the overall height of the heart is 29.5cm (11¾″).

☐ Mark centre of mat in the same way as for sunrise mat.

☐ Make a narrow plain hem round the edge of the mat, mitring the corners (see Sewing chapter 5, page 265).

☐ Cut out appliqué pieces for mat in colours shown in the illustration.

☐ Neaten edges of each section.

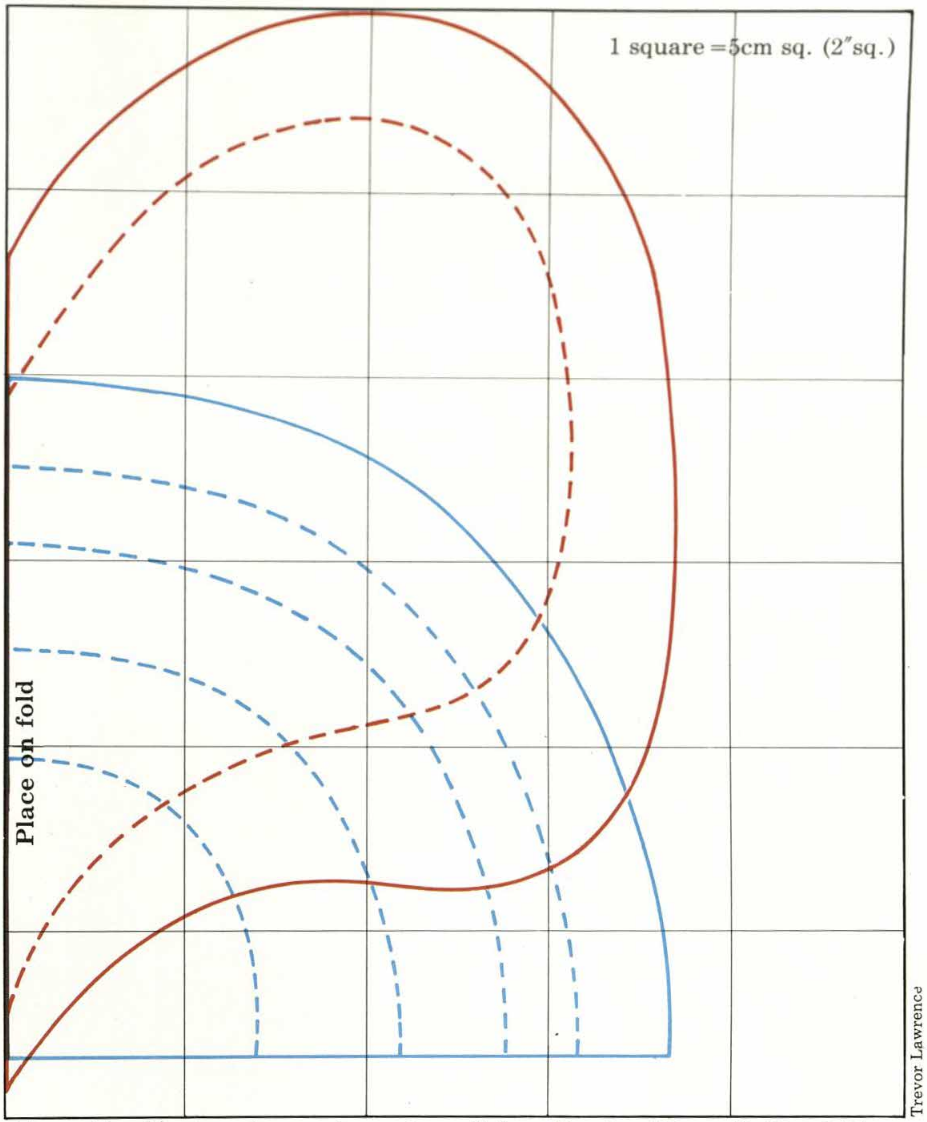
☐ Work appliqué and apply as for sunrise motif. When applying ric-rac braid begin at lower point.

To make the napkin. Adapt the heart graph pattern so that the overall height of the outer heart is 14cm (5½″).

☐ Make a narrow plain hem all round the napkin, mitring the corners.

☐ Fold the napkin in half vertically and then horizontally. Press in the folds. Open out napkin and refold once diagonally. Mark this line on one quarter only with a line of tacking.

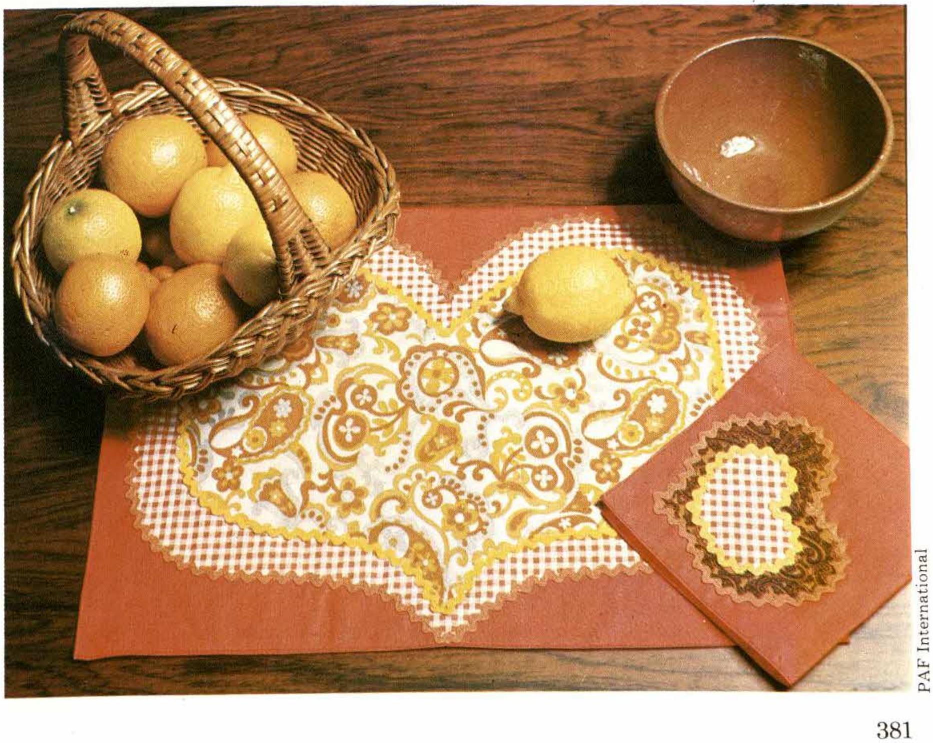
☐ Make patterns and work appliqué as for mat, positioning heart centrally on this line.



Trevor Lawrence

Above. Graph pattern for sunrise and heart motifs used on the tablemats.

Below. Heart motifs applied to a tablemat and matching napkin, with ric-rac.



PAF International

Making dyes from plants

Colour — dyeing 3

All around us, in our gardens, on walks and even in the kitchen, we are surrounded by plants which make dyes and which, according to the various methods of dyeing, give a fascinating number of hues.

The principle of plant dyeing is simply to extract dye by simmering a large quantity of the plant—flowers, berries, leaves or bark—in water. It is an ancient art, and people of different

Steve Bicknell

localities still produce wonderful variations of colour from their special knowledge of the plants around them. The rich shades that characterize Persian rugs and carpets, for example, come from vegetable dyes, which with age develop a mellowness of hue unlike anything produced with modern commercial dyes.

Dyeing from plants is fun and it is basically easy to do, but you need a love of adventure and a desire to experiment to get the most enjoyment out of it because no two plants are ever quite the same and they can give surprising results.

Getting the plants you need depends largely on where you live and what season it is. Madder and indigo can sometimes be purchased, and turmeric and onions are part of any kitchen, but for anyone really interested in natural dyeing it makes sense to grow your own dye plants.

Fabrics

Wool is the best material for vegetable dyeing. Cotton, silk and linen can be dyed, but they usually require rather complicated processes and so are not treated here.

Yarn is particularly suitable because hanks of it can be dyed with different plants, depending on the amount of dyestuff available, and then knitted or crocheted into garments of one or more colours.

Any white, woollen garment can be dyed, and those which are beginning to yellow will take on new life when dyed a colour from nature.

Equipment

Apart from dyestuffs and mordants (discussed below), you need no more equipment than what can be found in any kitchen.

As long as you are sure that the plants you are using are not poisonous you can use your cooking pans and sieve, provided they are large enough. But if you intend to experiment with new dyes, do not use your cooking utensils for dyeing.

You will also need rubber gloves and a stick for stirring; an old mop handle will do or, if you prefer, a wooden dowel or a glass rod. If you are dyeing several colours, you will need a different stick for each one.

Extracting dyes

Colour is extracted from plants by simmering, preferably in soft rainwater. If this is not available then soften tap water with a water softener. Extracting dye can take anything from 20 minutes to 3 hours, depending on the plant and the part of the plant you are using. As a general rule, tender sections, such as flowers and leaves, need less simmering and will become dull if cooked too long, while tougher sections, such as hard berries and barks, may need pounding beforehand and longer cooking to draw out their colour.

The rich, warm tones of natural dyes recall the colours of the earth.

Plant dyeing is more of an adventure than a science and it is impossible to chart exactly the course a colour will take, since plants vary with the season and the locality. One way to get an idea of the strength and colour of your dye is to immerse a sample piece of yarn in with the plant.

Plant quantities. A considerable amount is needed to get dyes, and the amount varies with each plant, but 113 gm (4oz) of plant material to 28gm (1oz) of wool is a useful guideline.

To extract dye, cover the plant material with soft water and keep topping it up with more hot water as it simmers. When the dye has been extracted, strain off the liquor. You can throw the plant remains on to a compost heap. Let the liquor cool to hand-heat before you add the wool.

Camera Press

Wool is the best material for natural dyeing. Yarn must be loosely tied.

Dyes can be stored for future use in tightly sealed jars and kept in a refrigerator.

Dyeing wool

There are two ways to dye wool—by direct dyeing and by dyeing with a mordant.

A mordant is a chemical which has an affinity for both fibres and dyestuffs and which improves both the colour and the fastness of the dye.

Direct dyeing

Not many plants can dye direct, ie without a mordant to fix the colour. Those which can include onion skins, sloe berries, bilberries (blue berries), black walnut hulls, white snowberry (*symphoricarpos albus*), common grey wall lichen, turmeric, golden-rod and ragwort.

To dye direct, first wet the wool thoroughly. If you are dyeing an old garment it is wise to wash it to make sure it is clean and receptive to the dye. Hanks of yarn can be tied very loosely and put straight into the dyebath, but balls of yarn will not dye right through and so must be rewound in some looser way.

Put the wet wool into the dyebath and raise the temperature *very* slowly to simmering point. It is important that the temperature is raised very gradually.

Keep the dyebath simmering for the time required to get the depth of colour you want. This can vary a great deal; some dyes, such as onion skins and turmeric, 'take' very quickly, while black walnut hulls require up to three hours.

Never allow the dyebath to boil vigorously as this can destroy the colour and may cause the woollen fibres to matt.

While the wool is simmering, stir it occasionally to make sure the dye is reaching all parts of the material. Use a glass or wooden stick and from time to time lift the wool up to check the intensity of the colour. When deciding if the correct intensity has been reached, bear in mind that the colour will be somewhat lighter when the wool is dry.

When the colour is deep enough, let the wool drip over the pan for a minute then, wearing rubber gloves, squeeze each hank lightly and plunge it into warm, soft water. Rinse thoroughly; it is very important to rinse out all the surplus dye or the cloth will bleed later when it is washed.

Dipping in a strong solution of salt often fixes the colour but it sometimes changes it as well.

Always dry wool in a cool, shady place.

Mordant dyeing

There are many substances which act as mordants to improve the colour and fastness of dyes, but two of the best known are alum and iron, obtainable from pharmacies. Alum generally has the effect of brightening natural dyes while fixing the colour at the same time. Iron also fixes colour, but has the effect of darkening it and, in the case of many yellow dyes, turning them to green.

To mordant with alum (potassium aluminium sulphate—available from pharmacies), use 28gm (1oz) or 1¾ teaspoons of alum for each 113gm (4oz) of wool.

Alasdair Ogilvie

DYE PLANT CHART

Plants that make dyes

Yellow

Barberry—twigs (Berberis vulgaris)
Black Oak—bark (Quercus velutina)
Broom—tips and flowers (Cytisus, Genista, and Spartium species)
Golden-rod—tops and flowers (Solidago species)
Onion—outer skins (Allium cepa)
Queen of the Meadow—tops (Filipendula ulmaria)
Ragwort—tops and flowers (Senecio jacobaea)
St. John's Wort—tops and flowers (Hypericum species)
Snowberry—berries (Symphoricarpos albus)
Tansy—tops and flowers (Tanacetum vulgare)
Weld—leaves and tops (before seeding) (Reseda luteola)

Blue

Indigo—most parts of tree, usually bought as indigo extract (Indigofera tinctoria)
Mahonia—berries (Mahonia aquifolium)
Woad—leaves (Isatis tinctoria)

Brown

Big Bud Hickory—bark (Carya tomentosa)
Black Walnut—hulls (Juglans nigra or J. regia)
Cutch—heart wood of tree and the pods (Acacia species)
Grey Lichen—whole plant (Parmelia saxatilis)
Larch—needles (Larix species)
Mahogany wood chips or sawdust
Mountain Laurel—leaves (Kalmia latifolia)
Oak—bark (Quercus species)
Pyracantha—twigs (Pyracantha angustifolia)

Orange

Coreopsis—flowers (Coreopsis tinctoria or C. marmorata)
Dahlia—orange flowers (Dahlia species)
Lady's Bedstraw—roots (Galium boreale or G. verum)
Madder—roots (Rubia tinctorum)
Onion—outer skins (Allium cepa)

Rose, pink, purple

Bilberry—fruits (Vaccinium species)
Black Currant—fruits (Ribes nigrum)
Black Huckleberry—fruits (Gaylussacia baccata)
Blackberry—fruits (Rubus species)
Elder—fruits (Sambucus nigra and S. canadensis)
Sloe—fruits (Prunus spinosa)
Wild Grape Vine—grapes (Vitis species)

Red

Bloodroot—roots (Sanguinaria canadensis)
Dahlia—red flowers (Dahlia species)
Geranium—red flowers (Pelargonium species)
Hemlock Tree—bark (Tsuga species)
Lady's Bedstraw—roots (Galium boreale or G. verum)
Madder—roots (Rubia tinctorum)
Pokeweed—berries (Phytolacca americana)
Prickly-Pear Cactus—fruity protuberances (Opuntia polycantha)

Green

Bracken—young tops (Pteridium aquilinum)
Fustic—wood as chips (Chlorophora tinctoria)
Golden-rod—tops with flowers (Solidago species)
Horsetail—green above ground part (Equisetum species)
Ivy—berries when black (Hedera helix)
Lily of the Valley—leaves (Convallaria majalis)
Nettle—leaves and tops (Urtica dioica)
Privet—leaves (Ligustrum vulgare)
Weld—leaves and tops (Reseda luteola)

Black or Grey

Alder—bark (Alnus species)
Blackberry—young tips (Rubus species)
Buckthorn—berries (Rhamnus caroliniana, R. cathartica)
Butternut—nuts (Juglans cinerea)
Logwood—bark (Haematoxylon campechianum)
Yellow Flag Iris—roots (Iris pseudacorus)

Dye is extraced from plants by simmering a large quantity of various parts in water. The chart shows which colour or colours each plant makes and which parts produce dye. The labelled samples show some results.

The vivid colours in this crocheted skirt come from natural dyes. A large quantity of plant material is needed to make dye for a garment but bits of yarn can be dyed from small amounts. Skirt by Seonaid Robertson.

Mordanting is usually done before dyeing. Stir the alum well into enough soft water to cover the wool and allow it to move easily in a container. Add the wet wool. In the case of yarn always tie the hanks loosely to prevent them from tangling.

Heat the vessel slowly, taking about an hour to get to simmering point, and keep it simmering gently for a further hour, moving the wool from time to time with a stirring rod.

Then allow the water to cool until the wool can be handled. Let it drip over the pot, then squeeze gently but do not wring or rinse. Dye the wool immediately or dry it in a towel and store it.

It is possible to mordant with alum at the same time as you are dyeing by adding it directly to the dyebath, but there is a greater chance that wool may dye unevenly. Also, since mordanting with alum takes some time, it is advisable to mordant as much wool at one time as you can manage. Mordanted wool can be stored in bags containing moth repellent and taken out as required.

To mordant with iron (ferrous sulphate, also known as copperas and green vitriol), add the iron to the dyebath in the last 15 to 30 minutes of dyeing. Always lift the wool out before stirring in the mordant, then replace it and allow to simmer again. This will result in a deeper, and somewhat darker, tone. Use very little iron—about 4gm (⅛oz), just under a teaspoon, to 113gm (4oz) of wool. Too much iron tends to make wool rough.

Iron rust or iron filings can be used for mordanting, but they require greater quantities to be effective.

Always remember to rinse well in warm water after dyeing to retain the softness of the wool.

Recipes for dyes

There are innumerable recipes for plant dyeing and the dye chart shows some of the colours which different plants produce. These can all be varied by the addition of mordants and by other subtle changes in dyeing time and treatment. Amateur dyers are constantly finding new colours which can be worked together in embroidery, crochet and weaving, and indeed this is part of the fun of plant dyeing.

To find out if a new plant can be used as a dye, put in a small piece of yarn to simmer with the plant.

Yellow. Onion skins, ragwort, goldenrod and turmeric powder all dye yellow and can be used to dye direct or mordanted with alum for additional vividness and colour fastness.

Onion and turmeric 'take' very fast and after several minutes the yarn will turn a pale yellow. A deeper hue develops in 20 to 40 minutes.

The long-johns hanging on the clothesline pictured over leaf were dyed with onion skins. The skins were simmered for one hour and the long-johns for 40 minutes, with alum in the dyebath.

Green. Proceed as above to dye yellow. Then lift the yellow wool out of the dyebath and add iron mordant, 4gm (⅛oz) per 113gm (4oz) of wool. Put the dyed wool back in to simmer again until it turns green. Different skeins lifted out at different times will result in a variety of green shades.

Red. Madder is the easiest way to get red and the dye can be bought or extracted by simmering the dried outer skins of the root.

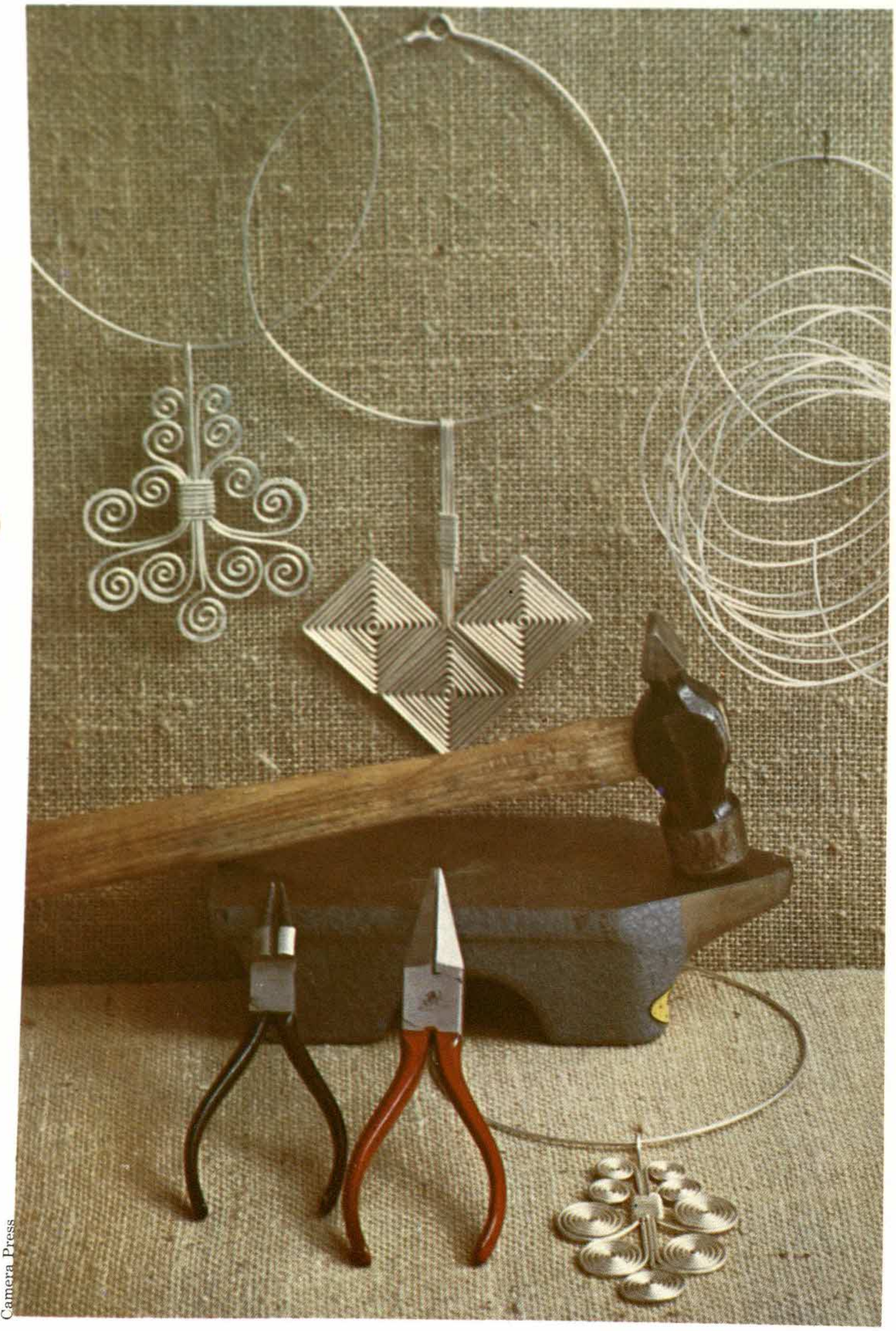
Mordant wool with alum and simmer in the dyebath for an hour, keeping the temperature below 60°C (140°F). If the temperature is too high the colour will go orange in tone.

The red shirt in the picture was dyed with madder.

Brown. To extract dye, simmer walnut hulls for three hours, then direct dye wool by simmering from one to three hours, depending on how dark a shade you want.

Silver wire jewelry

Making jewelry from silver wire requires plenty of practice. If you have never worked with wire before then use silver-plated wire, or better still copper or brass wire, to become familiar with the tools and techniques. Should something go wrong with your first attempts you can always scrap copper or brass wire and start again, but silver wire is more expensive to use for a trial sample.



Camera Press

Tools required include a hammer, anvil, flat and round-nosed pliers. The wire used here is made from silver but copper can be substituted to get some practice before using silver.

If you do spoil a piece of silver wire don't throw it away—you can use it later on for casting techniques.

The silver can be cut, sawn or hammered to shape it, depending on its form. However, the more silver is worked, or 'shaped', the harder it becomes, and eventually it will be too brittle to work.

Silver

Fine silver. Pure silver is referred to as fine silver. It is extremely malleable and ductile, and lends itself to being worked by hand. Fine silver can be used as a base for enamelling because its lustre and reflective qualities are ideal for showing transparent enamels at their best. Fine silver is extremely soft and will not retain its shape unless it is handled carefully. To make it harder, other metals are added to make an alloy.

Sterling silver. Copper is normally added to silver to form a strong alloy. It strengthens the silver without reducing its malleability. To qualify as sterling silver an alloy must consist of at least 92.5% fine silver.

Buying silver. Silver can be bought from silversmiths in various qualities. Since fine silver is so soft, sterling silver is more suitable for most jewelry purposes. It is available in sheets, strips, and as wire in various sizes, shapes and thicknesses. Explain your requirements to the silversmith who will cut to size and then weigh the silver. In the imperial measuring system 'troy weight' is used for measuring precious metals, and in the metric system grams are used.

Troy weight and metric equivalent. The terms used are:
24 grains = 1 pennyweight (dwt).
20 dwt = 1 ounce troy.
12 ounces troy = 1 pound troy.
(1 ounce troy = 1.1 ounce Avoir = 31.1 gm.)

Techniques

Making designs using silver wire is no more difficult than working with other types of wire. But as it is more expensive a bit more care should be taken so as not to waste it.

Working with silver wire has the advantage that it can be hammered to change its shape. Copper wire can also be hammered, but it is more difficult since it is harder, and silver-plated wire should never be hammered as the plating will be destroyed.

The hammering will also weaken the silver after a while, so if you hammer the wire do so with firm blows without making the wire too thin in any one place. The hammering will change the appearance of the silver—it will lose its lustre and become matt and covered with fine scratches. For this reason try to work on a smooth surface and use tools that have good, unscratched surfaces. Polishing will restore some of the lustre to the silver but avoid making this any more difficult than is necessary.

Annealing. To soften overworked silver it is heated and plunged into cold water. This process will restore the silver to its original state and is called annealing. It is not an easy process as strict temperature controls are required. So to avoid the problem of the silver becoming brittle, and therefore weak, do not work it more than is absolutely necessary to complete a design.

Tools

You will need all the tools described in Metal chapter 1, page 24.

You will also need an anvil, a hammer and a pair of flat-nosed pliers, all of which are available from most hardware stores and jewellers' suppliers.

The anvil does not have to be large as long as it has a flat surface of about 8cm (3″) square. You could make do with any small, flat steel surface.

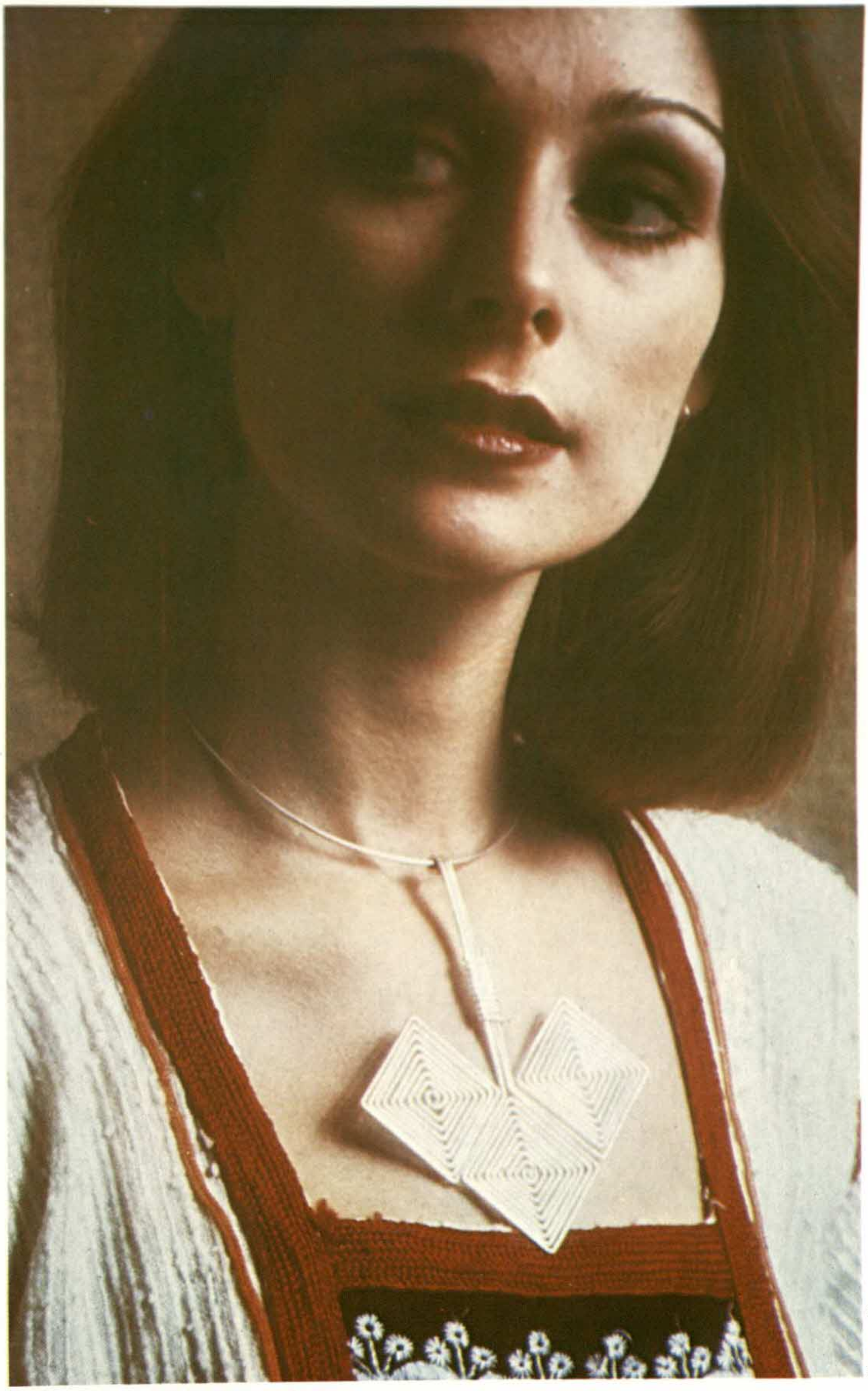
A Warrington or cross pein hammer is ideal for beating metal. Hammers are sold by the weight of the head and for planishing, ie metal beating, a 227gm (8oz) hammer head is ideal. The head should be polished and the handle made of ash wood. A wooden handle has a natural 'spring' to it and is therefore more satisfying to work with than a metal handle which has no spring. There are many other types of hammers, each with its own specific function. No doubt you already have some form of hammer and if it's not too heavy, and it has one flat surface, it will do, providing the flat surface is smooth.

If you decide to buy a hammer keep it for the specific purpose of beating metal, because any scratches or indentations caused by hammering nails will be transferred to the beaten silver.

Flat-nosed pliers are used in the same way as the round-nosed pliers but they make a square corner or bend rather than the curves made by the round-nosed pliers.

The insides of the jaws of the pliers must be quite smooth or they will damage the silver surface. If they are not smooth remove any scratches and indentations by rubbing down with a metal file.

These tools are available from most hardware stores and jewellers' suppliers.



Camera Press

This square patterned pendant can be made smaller by using only the centre square as a pendant. Similarly ear rings can be made by attaching the motif to jewellers' findings.

Square pattern pendant

The pendant is approximately 7.5cm (3″) at its widest point and 11.5cm (4½″) long, ie from the bottom tip to the neckband.

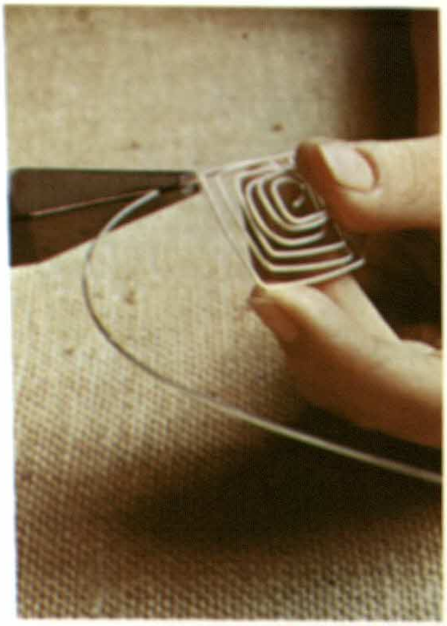
You will need:

1.93m (6′ 4″) sterling silver wire 1mm (gauge 18-19) thick. This length of wire will make the pendant illustrated above.

You can make it smaller by only making one square instead of three, or you could make two squares side by side. Depending on the number of squares the length of wire will vary.

For each square you need 46cm (18″) of wire, which includes the straight length which is attached to the neckband. For an average sized neck you need 41cm (16″) of wire which includes 5cm (2″) for the hook and eye to secure the ends.

Starting the design. It is tricky to make the interior part of the design.



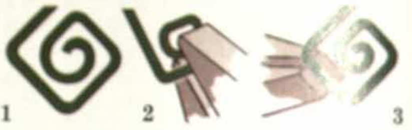
The flat-nosed pliers are used to bend the wire at right angles.

Make a hook and eye at the ends of the wire to which the pendant is attached.

Camera Press

The completed square is hammered to flatten it before assembling.

Start with a small circular curl and then make a square (fig.1). Practise this with a piece of copper wire (or any cheap wire) before using the silver wire. You might find it easier to use the flat-nosed pliers as shown in fig.2. Once the work is larger you can use the pliers as shown in fig.3. Make sure to bend the wire to an angle of exactly 90° to keep the geometric shape.



1. *Starting the square.*
2. *Working with flat-nosed pliers.*
3. *Bending the square corners.*

The pendant. Cut 3 lengths of wire 45cm (18″) long for the three squares.

☐ Work the design from the centre and make the square so that each side is made up of 9 strands of wire, counting from the centre.

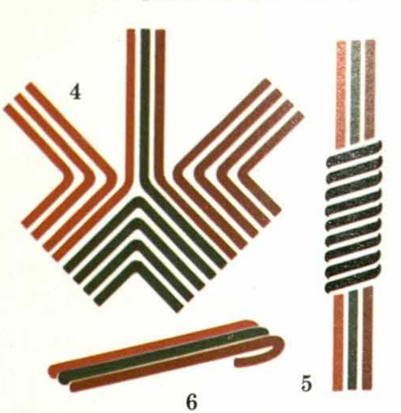
☐ Hammer the square patterns to flatten them but don't overwork them or they will lose their straight lines. Just flatten the surfaces slightly to give the wire an angular appearance.

☐ Assemble the three squares (fig.4), arranging 'stems' of wire as shown, ie running parallel to each other.

☐ Cut 41cm (16″) of wire for the neckband. Work it round with the fingers and make a hook at one end and an eye at the other end. Make any adjustment necessary to hook the ends together comfortably (see Metal chapter 3, page 127).

☐ Use the remaining wire and wind it around the three 'stems'. It will help if you rest the three squares on the edge of a flat surface with the ends jutting out. Start from the back, and end at the back, bending the wire as tightly as possible (fig.5).

☐ Place the pendant on the anvil,



Trevor Lawrence

4. *The square patterns are arranged together before binding.*
5. *The wire is held secure by winding a piece of wire around it.*
6. *The stem folded back to make a hook which is attached to the neckband.*

right side up. Hammer the binding around the stems. This will help to secure the pieces of wire. Hammer the wire pieces evenly so that they all spread to the same extent.

☐ Cut the three ends to the same length. Hold the pendant to the neckband, allowing 12mm (½") for a hook, and check that the pendant does not hang too low. Shorten the stems if necessary.

☐ Bend back the end of the stem as shown in fig.6. to form a hook.

☐ Insert the neckband and close the hook around it.

Alternative designs

The designs in this chapter are based on a central piece of wire attached to a neckband, and a number of wires on either side, both sides having the same number of wires.

In the square pattern pendant only one end of the wire is used to form the design, but in the curly pendant both ends are used. You can use any combination but it is always advisable to make a full-scale diagram. Draw one side and then fold the design in half along the centre line and duplicate the other half of the pattern. This will also give you some indication of how much wire you will need. Simply lay lengths of thread along the design, measure and add them up, allowing a small extra piece for any adjustments which may be needed.

Cleaning and polishing

If you have handled the wire carefully the surface should not require too much work. Any obvious indentations can be removed with a small metal file. Do not remove more silver than is absolutely essential.

A slower and safer way to smooth the surface is to use a fine grade wet and dry emery paper. Tear small strips from the paper, wet it and rub the surface until it is smooth. Wash in luke-warm, soapy water and thoroughly dry the article.

Cleaning and polishing materials are available from jewellers' suppliers and some hardware stores.

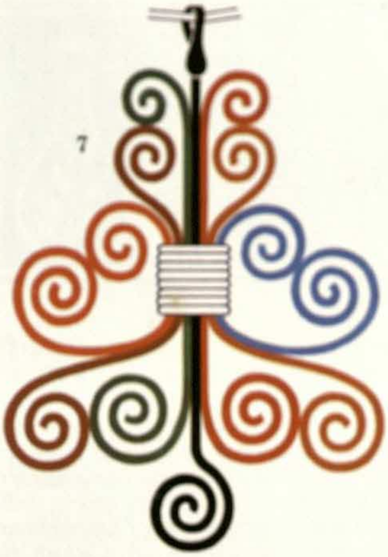
Pumice stone in powdered form will also smooth silver. Simply mix the powdered pumice stone with a little water and apply it to the silver with a soft cloth. Rub it well for a good finish.

French chalk and whiting (a variety of chalk) are finer than pumice and will polish the surface. Use the French chalk and whiting in the same way as the pumice stone.

You can also polish the silver with a metal polish or immerse it in a silver cleaning liquid.

An application of metal varnish to prevent future discolouration is optional.

7



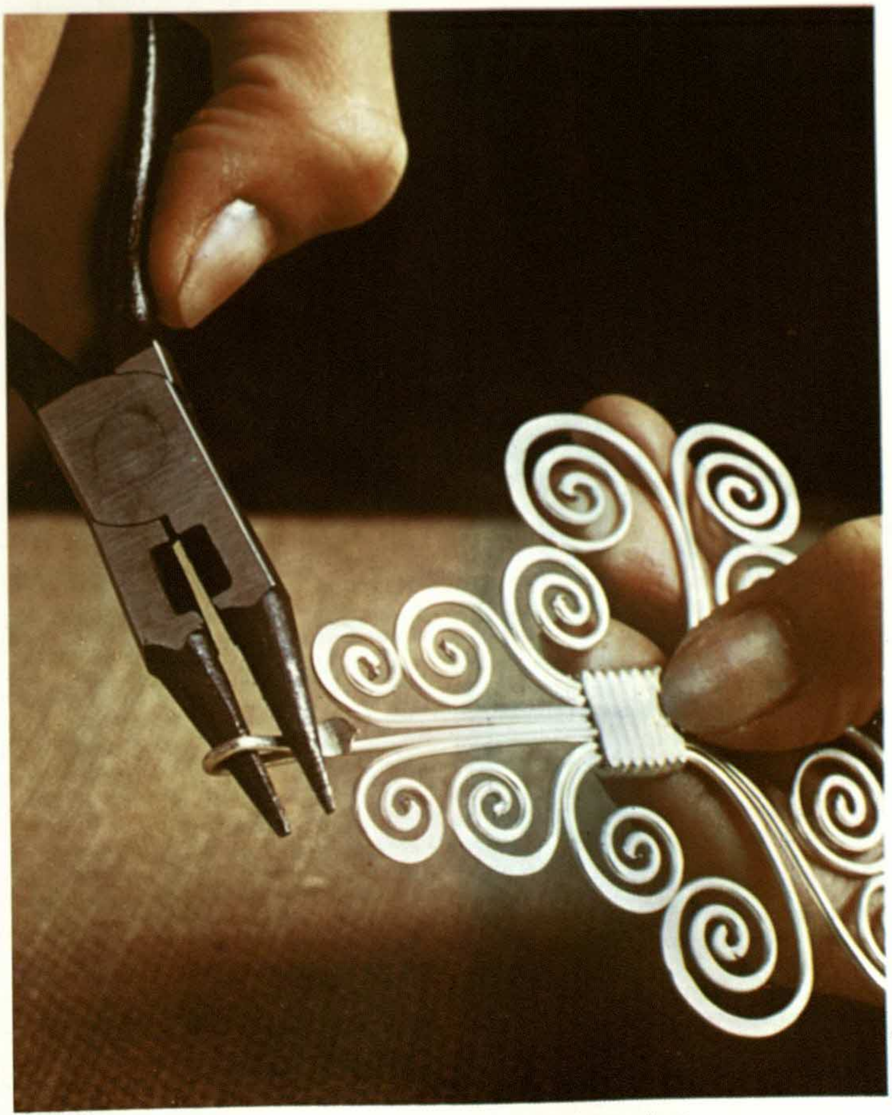
7. The different colours on the pattern show the separate pieces of wire used to make up the design. You can vary the design by leaving out any pair.

Curly pendant

The curly pendant is made up of seven pieces of wire, each 16cm (6¼") long plus 16cm (6¼") for the binding and 41cm (16") for the neckband. It is about 5.5cm (2¼") wide and 8.5cm (3¼") long. Make the curls by starting from the inside of the pattern, using round-nosed pliers. Make the long centre piece and hammer the top end flat before turning it to the front to form a hook for the neckband.

Complete the individual pieces. To get them all to match, lay them down on the design (fig.7) and adjust accordingly. You can hammer the curls slightly to flatten the wire. Concentrate the hammering on the lines that will form the outer part of the design.

To assemble the pieces of wire, bind them with wire starting from the back and ending at the back. Hammer evenly to secure the pieces. Attach the neckband by bending the centre piece forwards. Make a neckband as for square pendant to finish.



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The round-nosed pliers are used to make the curls for the pendant.

Drying and preserving herbs

Home herbalist 2

The fragrances of sweet smelling herbs, spices and flowers can be captured all year round in pot-pourri and sachets. Rooms, cupboards, household and personal linen can be kept fragrant and fresh with all the varieties of aromatic plants. You can give each drawer or cupboard a distinctive scent—sweet, spicy, delicate or intoxicating—making it both a special pleasure to open it and the contents delightful to wear or use in the home.

Fragrant herbs and flowers grow everywhere. They can be gathered and dried or they can be bought already dried at herbalist shops and mixed at home with essential oils and fixatives to give them scent. It is in the subtle blending of these fragrances and, in pot-pourri, of colour, too, that herbal art lies.

Harvesting herbs and flowers

Spring and summer are the seasons to harvest herbs and flowers for sweet-smelling pot-pourri, sachets and herb pillows, for once winter comes most of the herbs vanish from sight.

You must harvest herbs when their aromatic oils are most powerful, so pick them just before they flower, in the early morning when the dew has dried and before the sun is hot. Pick flowers when they are just open and absolutely unblemished, even though it seems hard to plunder them at that moment.

Harvest seeds when they are ready to fall, and roots at the end of the season. Pick only enough to lightly cover whatever drying shelves you have arranged and let the leaves remain on the stem. Separate any petals you want. Handle both leaves and flowers very gently to prevent bruising. As you pick herbs or flowers lay them one-deep on a tray or flat box.

Drying herbs and flowers

Your aim is to dry the herbs quite quickly with an even, low warmth—not less than 70°F (21°C) or more than 100°F (38°C). A good, even ventilation is just as important as the heat to carry away the humidity of the drying plants. Too much heat or too sunny or light a place will brown the leaves or, at least, dissipate the aromatic properties you are trying to conserve. So you want a dark place with little or no dust, but warmth and plenty of air.

Possible drying places are an airing cupboard or a clothes drying cupboard; a plate-warming compartment of an oven; a darkened, warm, well-ventilated room, passage or cupboard where you could set up a small fan heater; an attic, garage or darkened green-house; a dry, well-aired cellar, perhaps near a boiler.

The shelves must be well separated so that air can pass freely between them. You could use muslin tacked to a wooden framework, hessian or any open weave cloth stretched over dowels or framing, or the flat bottoms of cardboard boxes which have been perforated to let air through, but do not use wire mesh.

Bill McLaughlin

A beautiful container adds another sensual dimension to pot-pourri.

If you can alter and regulate the heat, one method is to begin drying with a temperature of about 90°F (32°C) for one day and then reduce the heat to 70°F (21°C) until the drying process is finished.

The drying space should only faintly smell of herbs; a strong smell means there is too much heat and escaping aromas. Don't add a fresh batch of herbs until the first batch is dry or you will add more humidity to the air. Turn the herbs as they are drying from time to time.

Experiment with drying until you get the fullest colour and smell in the herbs. It takes from four to fourteen days or more to dry herbs and flowers. Some flowers, such as rosemary flowers, are better dried slowly at a lower temperature than herbs.

Leaves are dry when they are brittle but will not shatter. Flower petals should feel dry and slightly crisp. Roots should dry right through with no soft centre.

Store all dried plants in airtight containers in a cool, dark place.

Air drying. Tying a bunch of herbs and flowers and hanging them upside down in a dry, airy space is an old method of drying herbs, and more satisfactory in a dry climate than in a humid one. Air drying is likely to retain less colour and scent but needs no special arrangements.

Pot-pourri

Pot-pourri can be made of all scented plants—flowers, fruits, herbs, barks, spices—and it is the blending of these that produces the dimly fragrant, sometimes mysterious, aromas.

Choose a main scent—it is often rose petals in a pot-pourri, lavender in a sachet—then add others to give the mixture fleeting undertones. You can also add drops of essential oils bought from a herb stockist. A fixative, such as orris root, is needed to hold the perfumes longer than the flowers and leaves can on their own.

Choose a beautiful container—an apothecary jar, open-work silver or ceramic pot, china or porcelain box or urn. If the pot-pourri is to be seen, arrange it with leaves of elusive greens, small rosebuds, marigolds, pressed violets, pansies and everlasting flowers. Some of these do not hold their scent as well as, say, roses, tuberoses and lavender, but they give perfect shape and delicate colour.

Experiment with scents because they vary from garden to garden and overlap from plant to plant. For example, neroli is a scented substance in fragrant roses which is also in geraniums, jasmine, orange blossom and wallflowers. Citronellol is in roses, geraniums and eucalyptus, and eugenol is in bay, cloves, hyacinths and tuberoses. The choice of scent is infinite—violet, jonquil, narcissus, lilac, honeysuckle, lily of the valley, the mints, rose geranium, rosemary, and in warmer climates, oleander, magnolia, lotus, jasmine, gardenia, orange blossom, acacia or wattles.

Also consider using these—cloves, nutmeg, cinnamon, mace, vanilla pod

Presentation is part of the delight of herbs. While the delicate colouring of pot-pourri should be visible, the fragrance of herbal pillows is emphasized by floral-printed casing, and a bit of lace adds freshness to sachets.

Steve Bicknell

from the Mexican creeper, woodruff, tonquin beans, sandalwood, cedar and sassafras, eucalyptus leaves and citrus peel.

Floral pot-pourri

There are dozens of combinations to experiment with, but this one is simple.
1 lit (2pt) rose petals.
0.5 lit (1pt) rose geranium leaves.
0.5 lit (1pt) lavender flowers.
1 cup rosemary needles.
2 tablespoons each of ground cloves, cinnamon, allspice.
3 tablespoons crushed orris root and powdered gum benzoin.
20 drops essential oil of rose.
5 drops essential oil of sandalwood or citrus.

Jasmine pot-pourri

0.5 lit (1pt) jasmine flowers.
0.3lit (½pt) orange blossoms and gardenias.
0.3 lit (½pt) geranium leaves, including the lemon, peppermint and rose-scented ones.
57gm (2 oz) cassia.
57gm (2 oz) gum benzoin.
A vanilla pod or drops of vanilla oil.

Herbal pot-pourri

Choose the leaves from angelica, basil, bay, rose geranium, bergamot, borage, lemon balm, lemon verbena, thyme or lemon thyme, lovage, marjoram, mint, rosemary, sage, sweet cicely, tarragon and eucalyptus.

Choose flowers from borage, camomile, elder, lavender, lime, cowslips, cornflowers, clover, marigolds, nasturtiums, rose petals, wallflowers and violets.

Choose spices from ground cardamon, cinnamon, cloves, nutmeg, citrus peel and coriander,

To make a pot-pourri

Add drops of oils to dried flowers and fixatives, then put flowers, leaves and spices in layers in the container. Use small, whole flowers and leaves to decorate the top layer. Place mixture in airtight container and leave jar for six weeks, turning the ingredients weekly.

Herb pillows

For dreams of summer, put a herb pillow in your pillow case. Herbs to soothe the insomniac include angelica, woodruff, sage, hops, dill, camomile, bergamot, lavender, valerian (a rather unpleasant smell), lemon balm, lemon verbena, tarragon, elder flowers and borage.

The herbs that were used for strewing on bare floors in the Middle Ages are also good for herb pillows—thyme, mint, basil, hyssop, marjoram and rosemary.

Make a cotton or muslin bag to any size you want, to hold the herbs, and then make a cover for it that can be laundered—in sprigged cotton or perhaps white embroidery on white cotton.

Mix together equal parts of lavender, lemon verbena and mint, and add small quantities of any of the herbs listed above.

Or mix equal parts of rosemary blossoms, rosemary needles, pine needles, rose geranium leaves and lemon balm.

Or mix equal parts of rose petals and lavender, and add small amounts of woodruff, camomile, dill, sage, bergamot and tarragon.

Or use hops only. Many people feel a hop pillow is best for insomnia.

Sachets

Hang these on hangers; put them in drawers, linen cupboards and under cushions. Try a half-and-half mixture of lavender and lemon verbena; or southernwood, bergamot and lemon balm with twice as many rose petals and lavender.

If you wish, add to any of these mixtures some spices—coriander seeds, cloves or cinnamon.

Sachets can be made of small squares of silk, cotton print or organdie, and treated as miniature pillows, or they can be gathered across the top and secured with a ribbon. This method means that they can be refilled later on.

Using related colour schemes

Design know-how 14

Colours close in hue lie next to each other in the colour wheel and are known as related colours. In a craft such as weaving, where the threads don't actually mix, the effect of combining green and blue, pink and red, red and orange, or blues and violets can be very lively. In painting, one way of producing a colour is to mix neighbouring hues, orange and violet to make a subtle red, for example.

Also bright colours which appear to stand out appear to be influenced by the colours next door in the colour spectrum. A red object will reflect orange and violet, a blue object reflect green and violet, and a yellow object reflect orange and green.

Why use related colours at all? What distinguishes them from any other range of colours? In this chapter related colour schemes are carefully considered—what they are and what they can be used for.

First, if you look at anything in nature, a poppy, for example, you will see that it is not a solid area of colour—it contains orange, violet and red flecks which make up the colour of its petals. This colouring gives brilliance, depth, and even iridescence, to the poppy and imparts richness to what would otherwise be a flat, blank surface.

In the same way, if similar hues are 'woven together'—perhaps literally as in shot silk and woven cloth, or in close combination—they appear to reinforce each other, adding strength. Even low intensity colours, if used with other adjacent hues, seem to gain in vibrancy, picking up depth from each other. On their own they might seem diluted and anaemic, but together they almost glow, and yet they still remain quiet colours. The impressionist painters made us aware of what excitement and variety there can be in colours which are close but different.

Second, by gradual change from one colour to another adjacent colour you can suggest movement away from or towards the light. Yellow reflects a great deal of light, orange less light and violet very little light. A wall hanging, for example, which begins at orange and moves through red to violet will appear to move from light into shadow or gloom. The orange area also seems to be larger than the red area, which in turn appears larger than the violet. When using stripes you can 'cheat' by making the light coloured stripes thinner than darker coloured stripes: they will then appear to be the same in width. Whether or not you intentionally use colours in this way, it is as well to know what kinds of effects they will produce.

In the same way the shape of a three-dimensional object can be emphasized by the use of adjacent hues, darker colours in the hollows, lighter hues for highlights and so on. A round object can give the impression of movement if it is coloured in related hues which appear to move towards and away from the light.

It is possible to make an extremely effective colour scheme in your craft work with various combinations of related colours, from which numerous shades can be produced. Don't be put off by those old sayings such as 'Blue and green should never be seen'—they can look very good together. If you decide to use these colours you may find it best to allow one hue to predominate, to set the 'tone'. Alternatively, a number of related colours can hold together a set of objects—matching boxes, enamel colours in a bracelet, or a set of finger puppets—where monochrome might not give enough contrast and a medley of colours would be too distracting.

Whenever you are uncertain what hues or shades to choose, experiment with small samples of colours, arranging and rearranging them until you get the effect you want. Look at the way colours appear on their own, then in combination, then in sequence, and observe what happens—you may be surprised at the effect which neighbouring colours have on each other.

These blues and greens are different in hue and yet they have a great deal in common and work well in combination.

Alasdair Ogilvie

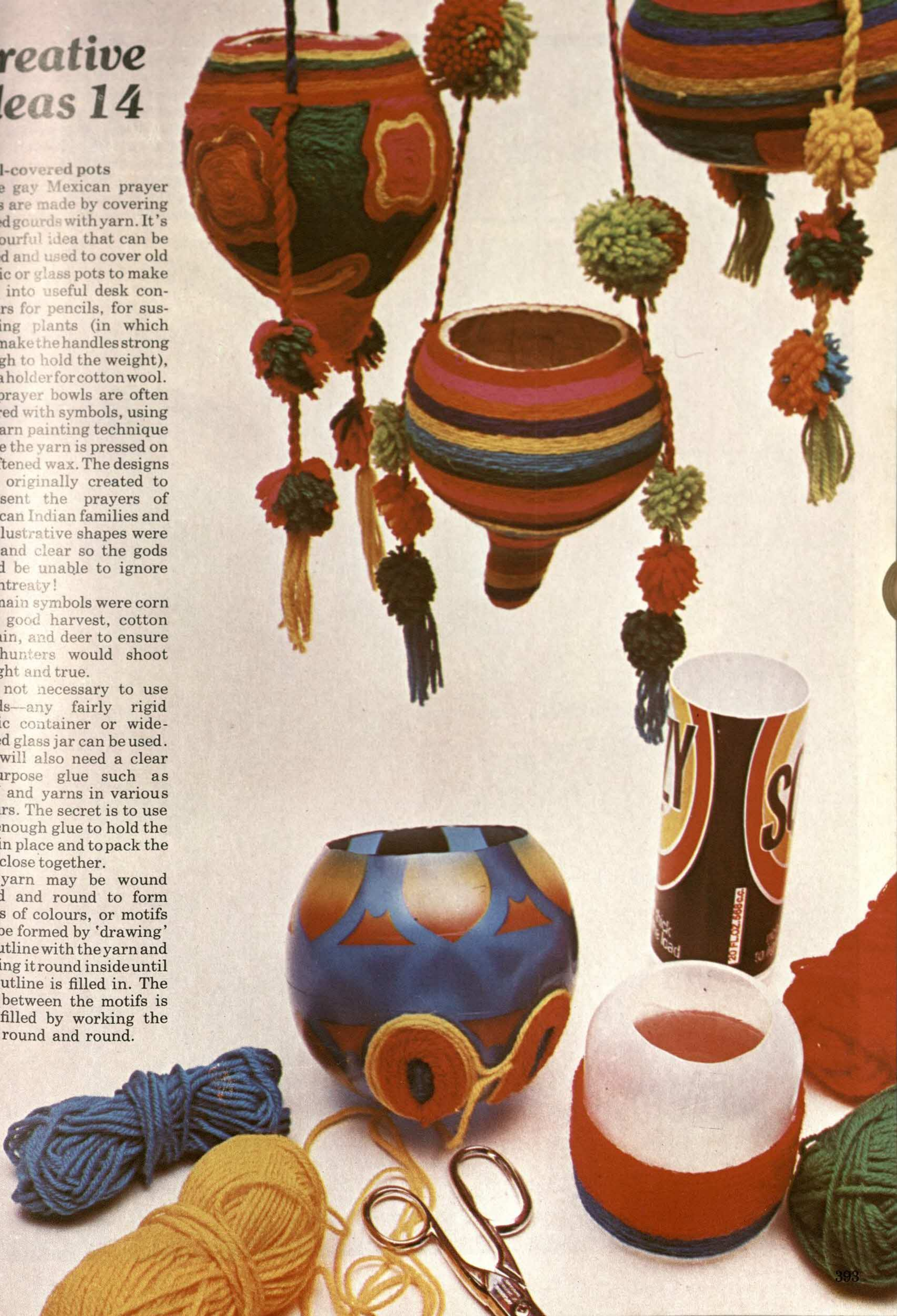
Creative ideas 14

Wool-covered pots
These gay Mexican prayer bowls are made by covering halved gourds with yarn. It's a colourful idea that can be copied and used to cover old plastic or glass pots to make them into useful desk containers for pencils, for suspending plants (in which case make the handles strong enough to hold the weight), or as a holder for cotton wool. The prayer bowls are often covered with symbols, using the yarn painting technique where the yarn is pressed on to softened wax. The designs were originally created to represent the prayers of Mexican Indian families and the illustrative shapes were bold and clear so the gods would be unable to ignore the entreaty!

The main symbols were corn for a good harvest, cotton for rain, and deer to ensure the hunters would shoot straight and true.

It is not necessary to use gourds—any fairly rigid plastic container or wide-topped glass jar can be used. You will also need a clear all-purpose glue such as UHU and yarns in various colours. The secret is to use just enough glue to hold the yarn in place and to pack the yarn close together.

The yarn may be wound round and round to form layers of colours, or motifs may be formed by 'drawing' the outline with the yarn and winding it round inside until the outline is filled in. The area between the motifs is also filled by working the yarn round and round.



Steve Bicknell

Colourful granule cooking

Plastics 6

Colourful transparent granules of plastic are easy to work with and there are many things to make with them. You can use the granules to make pendants, buckles, rings, bangles and mobiles. Once you have worked with the granules you will probably think of other things to make as well.

The granules are a form of thermoplastic, ie they are solid at room temperature but soften when heated and

Alasdair Ogilvie

can change in shape. When cooled they become solid again, retaining their new shape. This process can be repeated a number of times as long as the material is not allowed to overheat, when it will form bubbles and burn. If overheated the molten granules will ignite. It is quite safe to bake the granules in a kitchen oven—they will not dirty or damage the oven in any way and you can use the oven immediately after for cooking. An acrid smell is given off while the granules are baking so the room should be well ventilated.

You will need:

Granules, assorted colours.
Aluminium foil strip.
Baking tray.

☐ Pre-heat oven to 200°C (400°F), gas mark 6.

☐ To make a square panel fill the baking tray with granules and tap the bottom gently to shake the granules from the edges.

☐ Bake in the oven for 15-20 minutes so that they melt together.

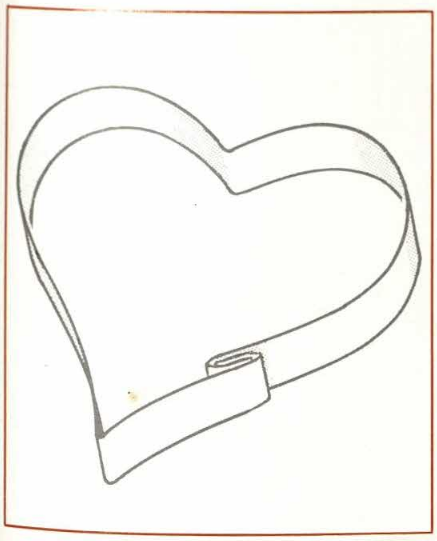
☐ Remove the tray from the oven and place it on a heat-resistant surface to cool.

☐ Remove the panel from the pan when it is cool.

☐ You can use pastry cutters to vary the shape. Simply fill the area inside the shape with granules and bake it as before.

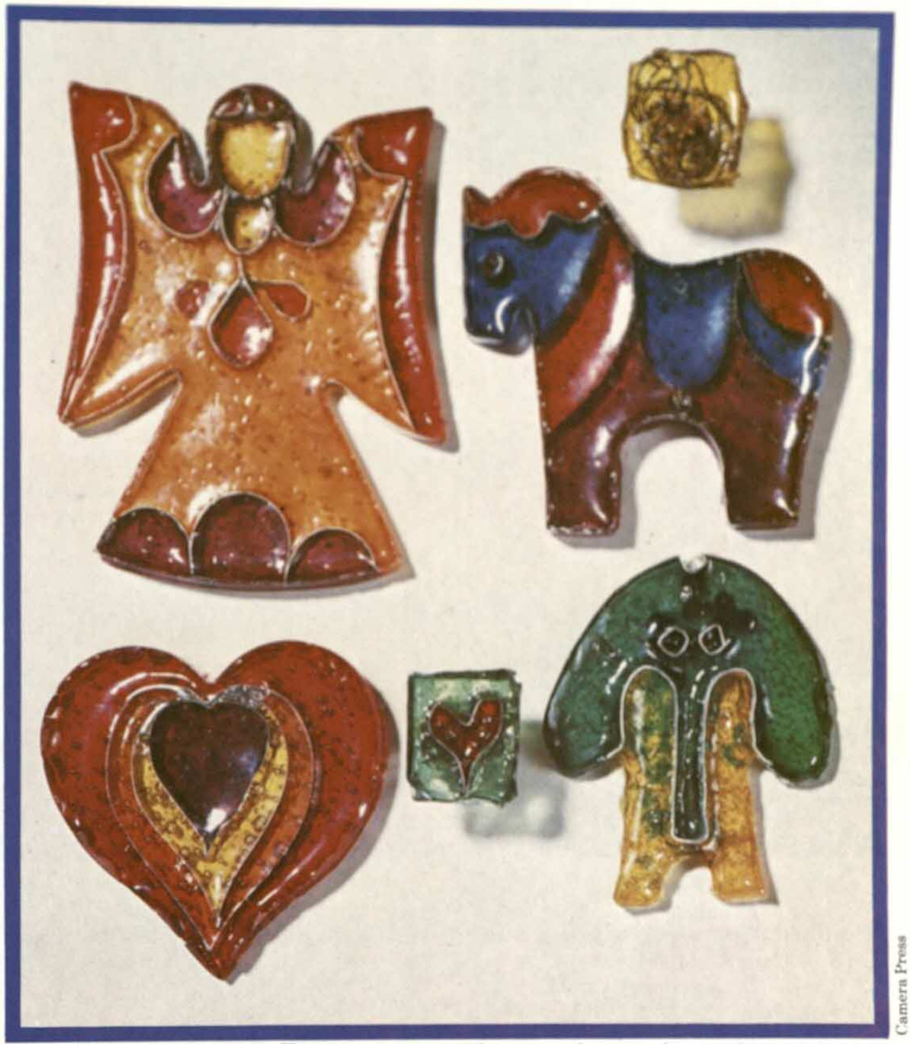
☐ If you want to make your own shapes you use a foil strip to make any outline you like.

☐ Take a length of foil strip and make a shape. Where the ends meet fold both ends back to follow one of the lines of the shape (fig.1).



1. *Above: the aluminium foil strip is folded back on itself for the outline.*

Left: the granules are placed in the sections formed by the aluminium foil strips before baking.



Camera Press

The granules can be used to make any shape. They can be adapted to decorations or mobiles.

Combining colours. To separate areas of colour within this shape use more foil strip to make the design.

Each compartment can be filled with granules of different colours and then baked. The outer foil strip peels off when cool but the strips within the design form part of the completed article.

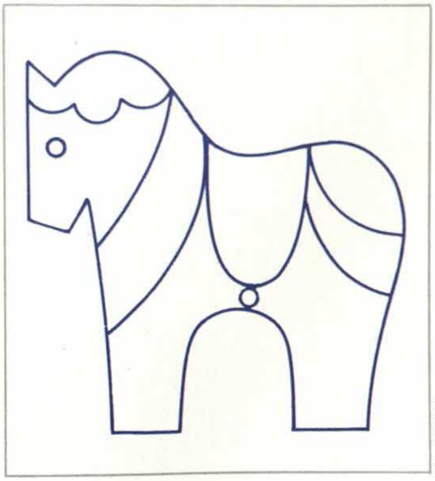
You can take designs from drawings or pictures and place the foil strip on it to make animals, birds or whatever you fancy. Arrange the completed design in the baking tray, fill the individual compartments with granules and bake.

Mixing colours. Change the colours of the granules by mixing them together or, if you want to make them lighter, mix any particular colour with clear granules before baking.

You can obtain a scrolled effect by pulling a metal knitting needle or fork through the different coloured granules while they are baking.

Differently coloured granules will combine to make new colours, for example red and blue give purple as you might expect.

You can re-bake an article with more granules or join several pieces together by re-baking. To create an interesting laminated effect, make individual coloured pieces and then arrange them on top of one another and melt them together. This is quite a tricky process as the colours will run together if you overheat them.

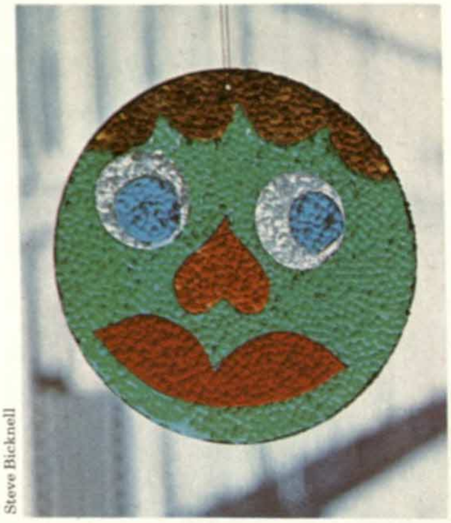


Paul Williams

Pattern for a horse.

Surface texture can be varied by decreasing the baking time, allowing the granules to fuse without running flat. To achieve a textured finish make a test by baking for 8-10 minutes and check the results. If the granules are smooth, decrease the baking time; if they have not fused together, increase the baking time.

To obtain an interesting cracked effect, plunge the hot baking tray into cold water.


Steve Bicknell

Under-baked granules.

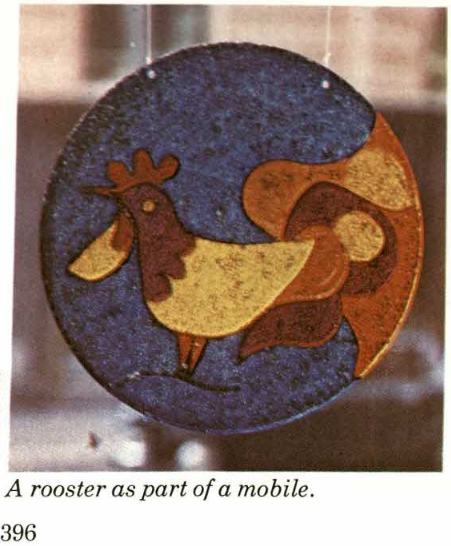
Camera Press

A panel made from granules baked in a large tray.

To embed flowers, leaves and pictures in the granules, place them on the soft surface of the melted granules when you remove them from the oven and press the objects flat on to the surface of the granules. Cover with more granules and bake again.

Alternatively you can make two flat pieces and place the objects in between, before melting the two pieces together.

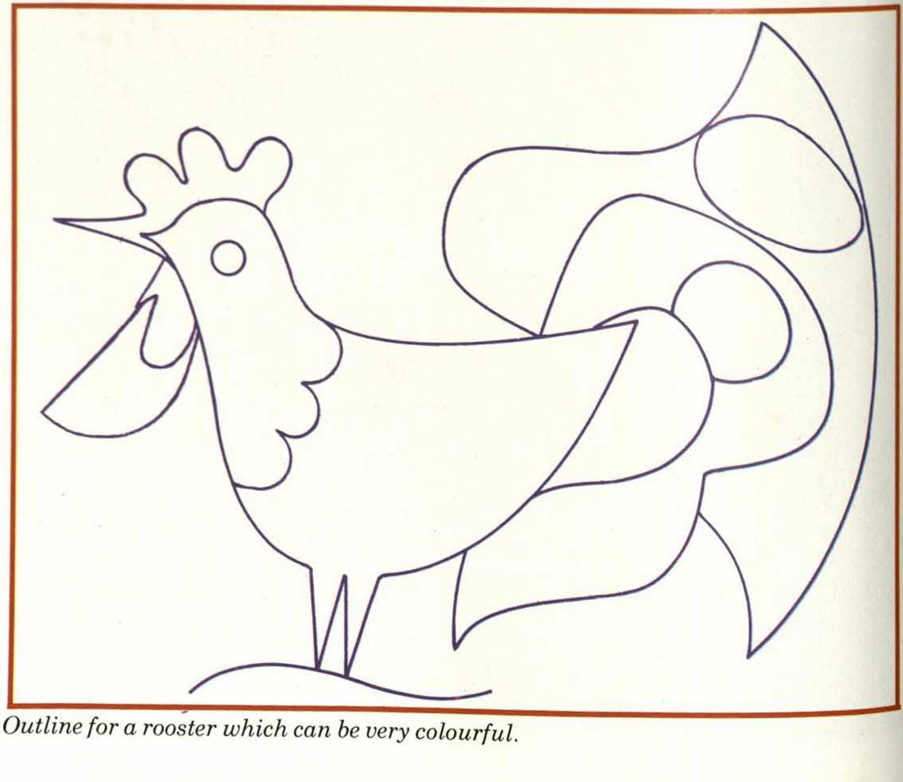
The finished articles can be sawn, or you can drill holes in them. The easiest way to make a hole is to push a heated metal knitting needle through the object.


Camera Press

A rooster as part of a mobile.

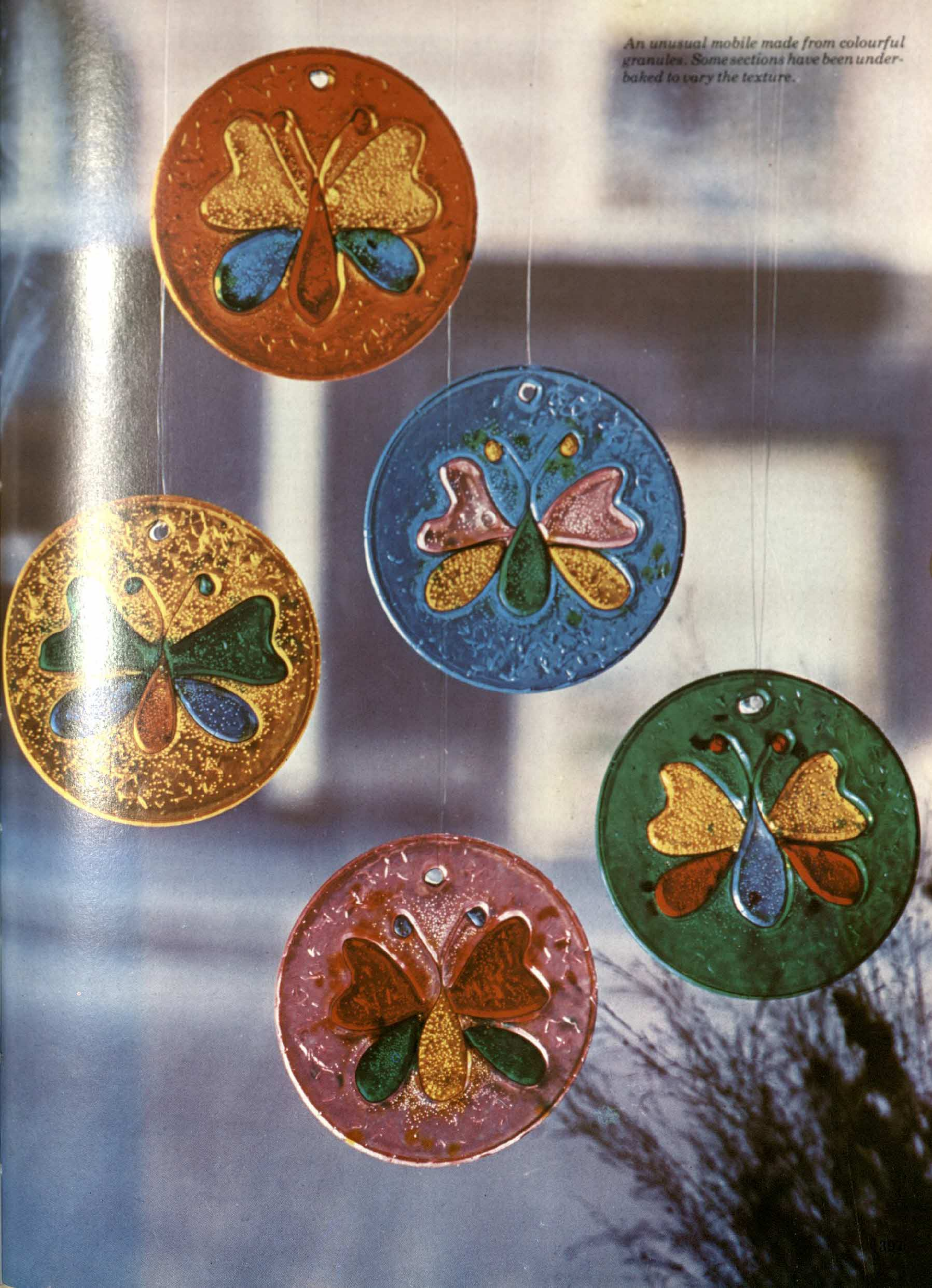
Tin foil moulds. You need not limit yourself to the flat bottom of the baking tray. You can shape tin foil to make three-dimensional, rough-textured flowers. To do this watch the granules in the oven and remove them before they flow together.

You can apply this technique using the granules in many ways, but always make sure that the oven is set to the correct temperature; an overheated oven will ruin the granules and produce excessive fumes, and can also cause the granules to ignite.


Paul Williams

Outline for a rooster which can be very colourful.

An unusual mobile made from colourful granules. Some sections have been underbaked to vary the texture.



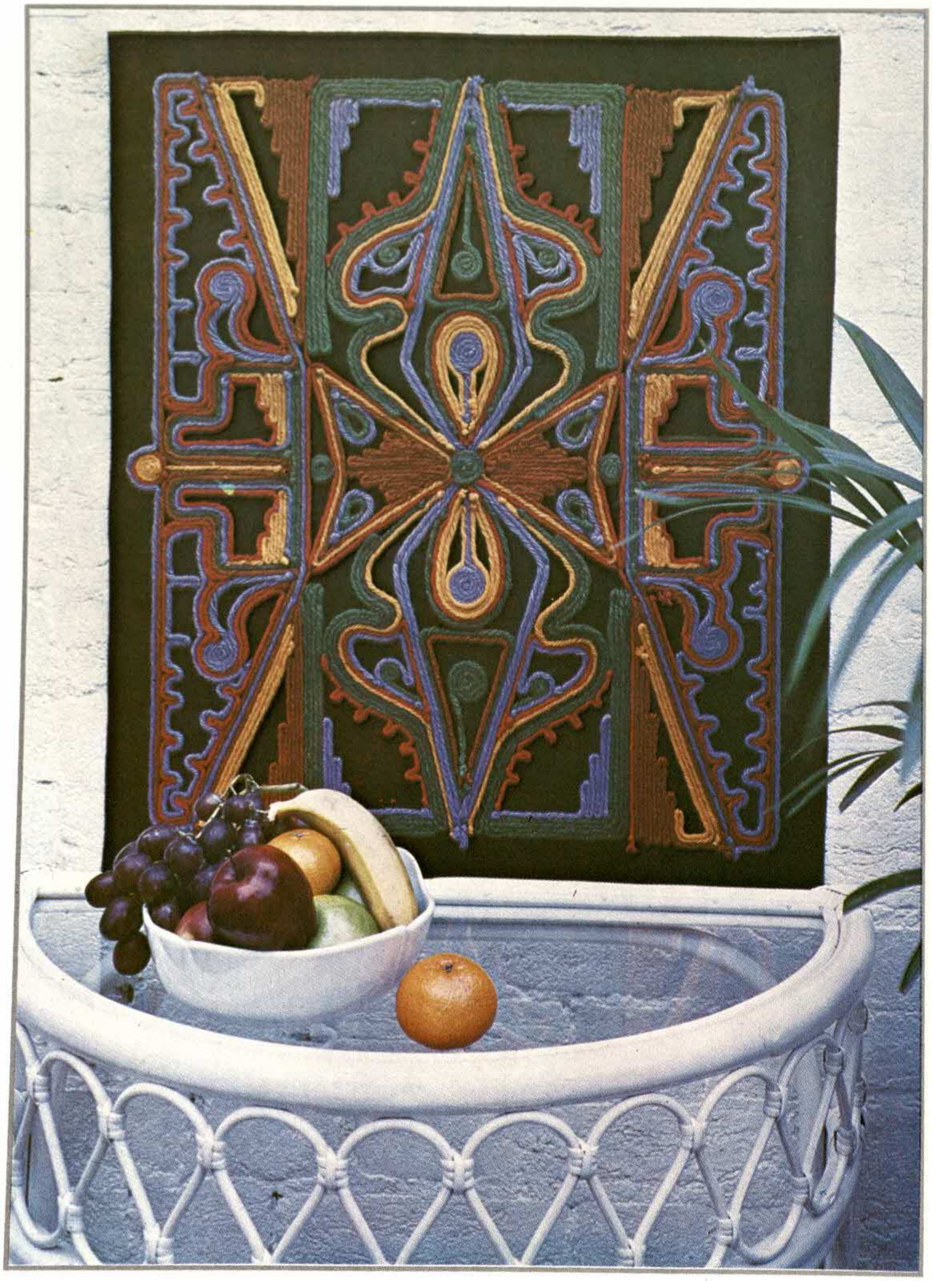
Mexican-style collage

Yarn — collage 1

The Huichol Indians of Talisco in north-west Mexico live in a mountainous and inaccessible region where Christianity has never penetrated.

As part of their religion, and often under the hallucinatory influence of the peyote cactus, they decorate small wooden plaques to place on altars as offerings to their gods. The plaques consist of coloured yarn pressed into softened wild beeswax.

The woollen yarns were originally dyed with extracts from lichens and plants. Nowadays some Huichol Indians travel to markets in neighbouring states to buy balls of yarn. It is in this way that the plaques have been brought to the cities and sold commercially.



Peter Heinz

Colour effects

The beautiful designs on the plaques are based on flowers, birds and animal life. The clear outlines are filled in simply and with great artistry.

The relation of shapes to one another and to the shapes formed by the spaces in between are carefully considered. The special glow which the colours have is achieved by placing several shades in sequence from light to dark, or in order of brilliance. The main shapes are nearly always outlined in black yarn. The background is usually filled in with a single colour chosen for its vivid contrast, although sometimes white is used.

Notice how the yarn is arranged in gradations of colour. For example, a flower could begin with yellow and pass through orange to red and purple, and then go in the reverse sequence or from red through purple to blue. A star could begin with white and pass through shades of pale yellow to deep gold or shades of light blue or purple to dark blue or purple. A tree could pass from yellow-greens to blue-greens and blue, with a different blue or black or red as a background filler.

So experiment first by laying the colours close to each other in a varied number of rows to get the best combinations of colours.

To make a simple panel

The wall panel (left) is simply made by gluing wool to felt. The thick rug wool gives a warm feel to the panel and makes it ideal for hanging in an entrance hall.

You will need:

Black felt 67cm x 57cm (26½"x22½").

The design enlarged (see Design know-how 4, page 112) to 30cm x 25cm (12"x 10") on tracing paper.

Turkey Rug Wool in 5 bright colours.

Clear glue, scissors.

☐ Find the centre of the fabric by folding it in four and marking the centre with dressmakers' chalk.

☐ Lay the felt on a flat surface.

☐ Draw over the lines on the back of the tracing paper with chalk.

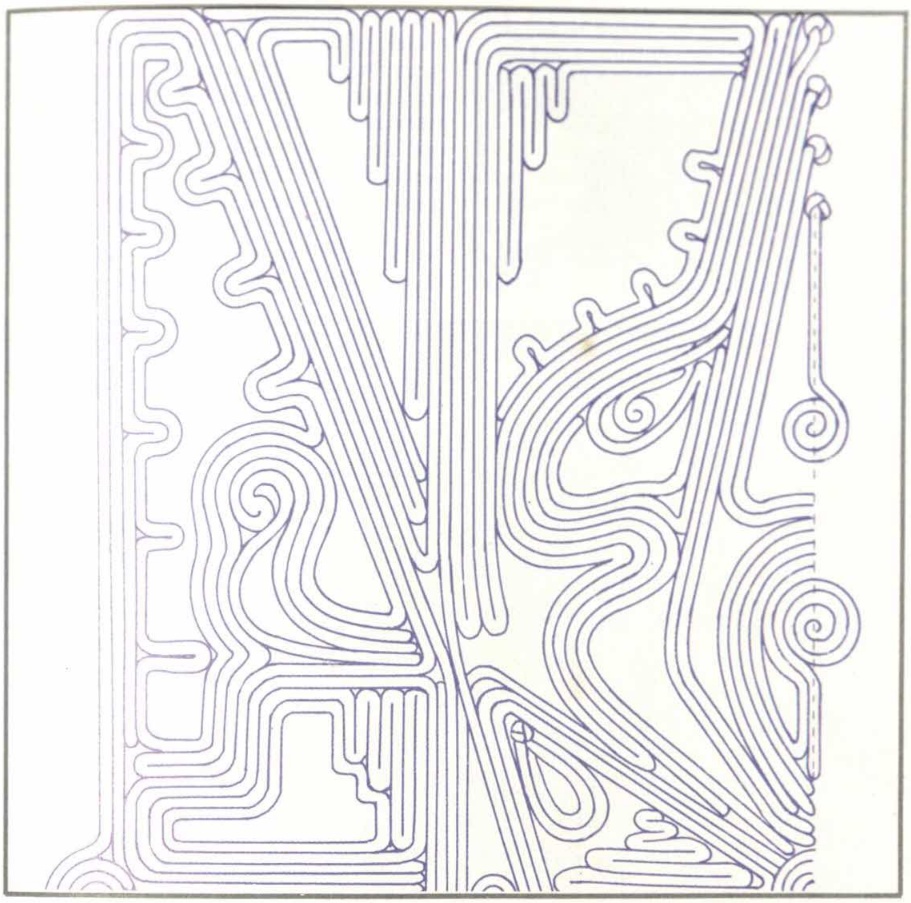
☐ Position the traced design (which is one quarter of the whole design) with the corner that represents the centre on centre of felt. Pin in position.

☐ Using a pencil draw over the lines on the right side of the tracing paper to transfer the chalk lines to the felt.

☐ Repeat the drawing along the lines on the back or front (the paper must be turned over to complete the design) of the tracing paper with chalk.

☐ Place the design next to the one already transferred, matching the lines carefully.

This brilliant wall hanging is a modern interpretation of an age old craft.



One quarter of the whole design photographed on the left.

☐ Repeat last two steps twice more.

☐ Lay the wool loosely around the outlines, following the colours used in the picture, add on a bit extra and cut. (It is easier to work with fairly short lengths rather than a whole ball of wool.)

☐ Draw along some of the lines of the design with glue. Lay the wool along these lines, pressing it gently into place. If you made too wide an outline with the glue simply cover it by placing an extra line of wool next to it.

☐ Continue in this way, gluing the surface a little at a time and pressing the wool on to the glue.

☐ Where points occur in the design emphasize these by making an overhand knot at the position of the point and gluing it in place.

☐ Tie a knot at the start of each length of yarn and trim the end close to the knot. To make a neat finish at the end of the yarn tie a knot where the ends meet and trim. The knot prevents the ends from fraying.

Bird wool painting

You will need:

The Mexican bird design enlarged on tracing paper to 12cm x 27cm (5″x11″) (see Design know-how chapter 4, page 112).

Hardboard, 12cm x 27cm (5″x11″).

Brightly coloured wool or nylon double knitting yarns, including black.

Pencil, clear glue.

☐ Place the tracing paper on the board and transfer the design. The line inside the bird outline and those which divide up the spaces between the bird and flower indicate where the change of colour takes place.

☐ Spread a thin layer of glue over the bird, flower, crest and leaf.

☐ Then take a length of black yarn and press it with your fingers around the outlines. Cut off any excess yarn so that the ends meet and give the appearance of a continuous line. Add three or four more lines of black inside the outline in the same way.

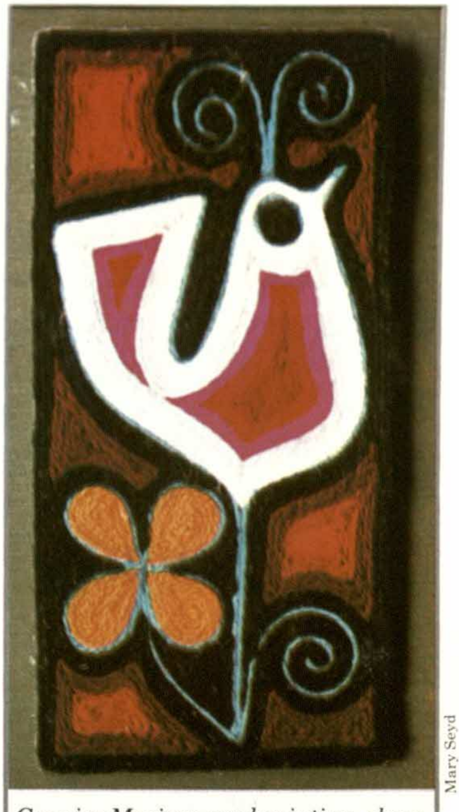
☐ Form the black lines next, and inside them press one or two rows of coloured yarn into the glue, as close as possible to the black lines.

☐ Continue in this way, changing the colours as indicated, until the whole shape of the bird is filled. Then fill in the flower.

☐ Now tackle the areas between the bird and flower outlines, spread them with glue and fill them in.

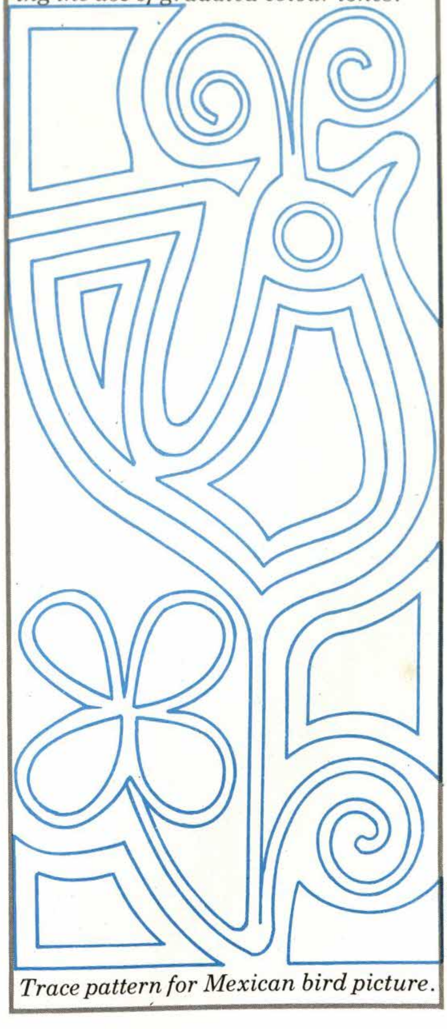
☐ Spread glue around the edges of the board and over any bare areas and cover with several rows of dark coloured yarn. When the board is completely covered the painting is complete.

Begin with this simple design, then create designs of your own.



Mary Seyd

Genuine Mexican wool painting, showing the use of gradated colour tones.



Paul Williams

Trace pattern for Mexican bird picture.

Simple cushion making

Cloth — sewing 6

Add an individual character to any room with cushions sewn by you in your own choice of fabric. Make them in a variety of shapes, sizes and textures, in colours to blend with your decor. Cushions also make a useful way to display other techniques, such as patchwork, appliqué and quilting.

The fabric

Most fabrics can be used for flat

Steve Bicknell

cushion covers (those without welts), although very fine fabrics usually need backing and can be difficult to work on. If you intend to pipe the edges of a cushion do not use a loosely woven fabric as the cord will show through.

How much fabric? For a plain (unpiped) flat cushion decide on the size of your cushion cover and allow at least twice this amount, plus 1.5cm (½″) extra all round for turnings. For a 30cm (12″) flat square or round finished cover you will need a piece of fabric at least 33cm x 66cm (13″x26″).

Allow an extra 45cm (½yd) of fabric if you intend to pipe the edge of the cover. This amount of fabric, although some wastage is involved, avoids too many joins in the casing strip.

For a well-filled, professional looking cushion make the cover 1.5cm (½″) smaller all round than its pad.

A whole heap of cushions in various shapes, sizes and fabrics.

Plain flat square cushion

You will need:

A cushion pad.

Fabric as above.

Matching thread.

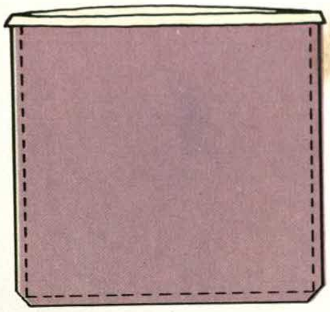
☐ Keeping the straight of grain, cut two pieces of fabric to the calculated size.

☐ With right sides together, tack and machine stitch around three sides.

☐ On the fourth side fold down the seam allowances on to the wrong side of each section and press. Trim the stitched corners (fig.1). Neaten turnings and turn right side out. Press.

☐ Insert the pad and slip stitch the opening neatly by hand. These stitches can be easily removed when the cover is washed.

Rectangular cushions are made in the same way.



Victoria Drew

1. *Square cushion stitched on three sides with corners trimmed.*

Plain flat round cushion

It is necessary to make a paper pattern to make sure of an accurate curve. Use the pin and string method (Design know-how 1, page 28) to draw a semi-circle on a large sheet of paper. Make the distance between pin and pencil equal to the radius of the finished cover, plus 1.5cm (½″).

You will need:

A cushion pad.

Fabric as above.

Matching thread.

☐ Fold fabric in half lengthways on straight of grain. Place the pattern with the straight edge to the fold. Pin into place and cut along the curved line only. Mark grain line along fold with tacking.

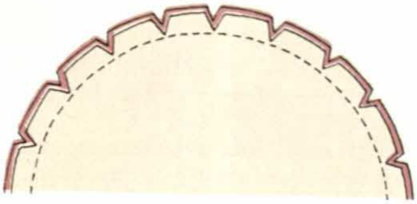
☐ Cut another piece of fabric in the same way.

☐ With right sides together, grain lines matching, place the two sections together. Tack and machine stitch 1.5cm (½″) from the edge all round the cover, leaving an opening of about one quarter of the circumference to turn through.

☐ Clip small V-shapes to within 3mm (⅛″) from the stitching at 3cm (1″)

intervals all round (fig.2).

☐ Finish off as for a square cover.



2. *Round cushion stitched and clipped.*

Piped cushions

Piping should be attached before the cushion cover is made up. It is not a good idea to pipe flat round cushion covers as these do not keep a good shape when the pad is inserted.

Zipper foot. To attach piping successfully by machine it is necessary to use a zipper or piping foot on your sewing machine. This is made in one piece, instead of split as with the standard foot, enabling the stitching to be worked close to the piping.

The cushion cover is usually inserted into the machine with its bulk on the left and the turnings of the seam under the foot. The needle should be to the left of the foot which is pressed up hard against the piping cord.

Keep the foot in this position throughout the sewing. At the corners, leave the needle down, lift the foot and turn the fabric round to the new position. Lower foot and continue sewing.

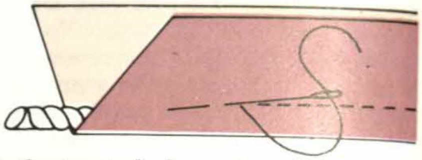
Piping consists of a cord covered with bias-cut strips of fabric and is stitched into a seam.

Piping cord is usually cotton and made up of three strands. It comes in a range of thicknesses and number 2 or 3 is most suitable for cushion covers. As the cord is liable to shrink, buy about 25cm (¼yd) extra. Boil the cord for about 5 minutes and dry it thoroughly before use to ensure that it is fully shrunk.

☐ Cut and join enough 4.5cm (1½″) wide bias strips to fit the perimeter of the cover, plus 10cm (4″).

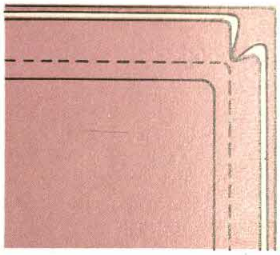
☐ Lay piping cord, slightly longer than the strip, centrally along the wrong side of this strip. Fold the edges together, with the cord in the middle. Tack or machine stitch casing firmly round cord to within 3cm (1″) of each end, keeping the stitching as close as possible to the piping (fig.3).

Steve Bicknell



3. *Casing tacked round cord.*

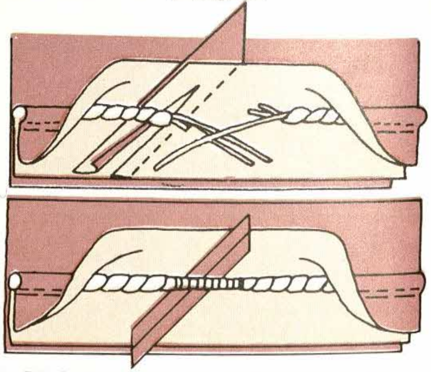
☐ Starting in the middle of a side, pin the casing all round the edge on the right side of one cover piece. The raw edges of the folded casing must be level with the raw edges of the cover. At each corner, clip into the casing seam allowance to within 3mm (⅛″) of the tacking stitches of the casing. This will make the piping lie flat (fig.4).



4. *Casing pinned in place.*

☐ To make a neat join in the piping, unfold the untacked portion of the casing at each end and overlap them by 1.5cm (½″). Adjust the overlap to fit the cushion cover exactly. Join the ends as for bias strips, trimming to 6mm (¼″).

☐ Overlap the cord for 3cm (1″) and trim off the excess. Unravel 3cm (1″) at each end and cut away two strands from one end and one strand from the other. Overlap and twist together the remaining three ends and oversew or bind them firmly (fig.5).



5. *Making a join in casing and cord.*

☐ Fold over casing and tack round joined cord. Tack piping to cushion.

☐ Place the second cover piece on top of the piped piece, with right sides together and enclosing the piping. Tack and machine stitch the cover together along three sides, stitching as close as possible to the cord.

☐ Finish as for a plain cover.

Left: piped patchwork cushion.

Two ways to insert a zip

When a cover needs to be removed frequently for washing you may prefer to insert a permanent type of fastening, such as a zip fastener.

Zip fasteners are best kept for use on cushions with straight sides as a zip fastener is inclined to distort the shape of a round cushion.

The methods given here are for piped cushions but plain cushions can be treated in the same way.

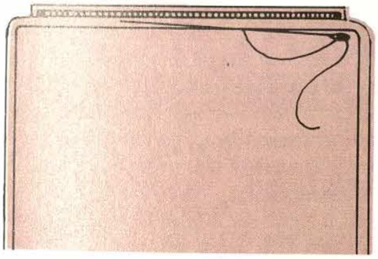
Zip fastener stitched by hand. This is a very neat way of putting in a zip.

☐ Make up the cushion in the usual way but stitch along the fourth side for 3cm (1") at each end. Fasten off the stitching securely. Turn the cover right side out.

☐ Press under the turning along the piped edge if piping has been used.

☐ Place the piped edge over the right side of the closed zip so that the folded edge of the turning lies centrally along the teeth of the zip.

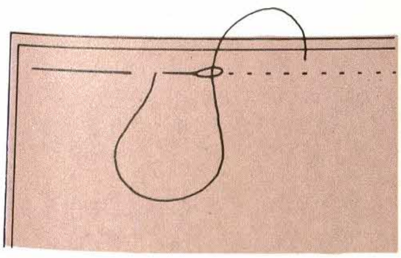
☐ On the right side of the cover tack along the gulley between the piping and cover (fig.6).



6. *Tacking along the gulley.*

☐ Fold under the unpiped edge of the opening and put it on to the zip so that it meets the piped edge. Tack in position close to the edge of the zip teeth, curving the stitching into the fold at the top and bottom.

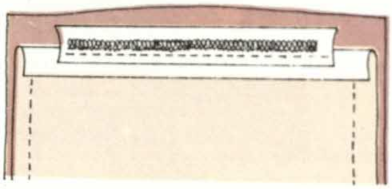
☐ Using double sewing thread, prickstitch the zip to the cover along the tacked line. Prick stitch is like a spaced back stitch, but on the right side of the fabric the stitches should be extremely small (fig.7).



7. *Working prick stitch.*

Zip fastener stitched by machine. With the cover inside out, place the zip face downwards on the piped edge of the opening, with the teeth as close as possible to the piping cord.

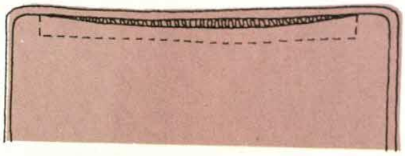
☐ Tack and machine stitch the zip to the turning and piping only, close to the teeth, using a zipper foot (fig.8).



8. *Zip stitched to piped edge.*

☐ Turn the cover through to the right side and place the other folded edge over the zip to meet the piped edge.

☐ Tack and machine stitch the cover to the zip tape 1cm ($\frac{3}{8}$") from the fold; take the stitching across to the fold at each end (fig.9).



9. *Zip machine stitched in place.*

☐ Undo the zip, turn cover to the wrong side and snip into the stitched-down turning at each end.

If you prefer, the zip can be inserted before the other three sides are stitched.

Cushion pads

Many large stores sell square and oblong cushion pads in a wide range of sizes. It is, however, quite possible to make your own pads in the size and shape you want.

Filling. Down is the most luxurious and most expensive filling and feathers are a good alternative, but many people today prefer to use a synthetic filling which has the advantage of being washable.

Kapok, shredded foam and foam chips are cheaper fillings, but kapok can give a lumpy look and foam becomes hard after a time.

Pad covers. These can be made from sheeting, calico or any inexpensive, firmly-woven fabric, but if you choose feathers or down for the filling it is essential to buy a down-proof fabric for the pad cover.

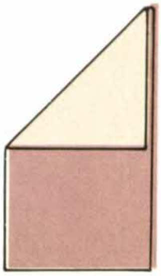
Making up. Make the cover in the same way as a plain cushion cover, remembering that it should be 1.5cm ($\frac{1}{2}$") larger all round than the outer cushion cover. Turn through to the right side and press.

☐ Stuff the cover with filling so that it is plump but not hard, paying particular attention to the corners.

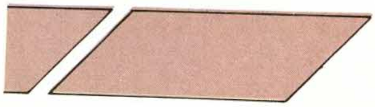
☐ Pin the folded edges of the opening together. Then tack and machine stitch close to the edge.

Basic sewing know-how

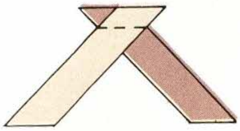
Finding the bias (cross). *Check that the edges of the fabric are level with the straight of grain. Fold fabric diagonally so that the selvedge is level with the crosswise threads. Press in this fold, without stretching it, and cut along the fold line.*

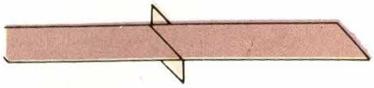


Cutting bias strips. *Cut along the bias fold line. Then, with tailor's chalk or pins, mark off strips of the desired width from this edge. Use a cardboard strip of the correct width to do this accurately. Cut the short ends of each strip so that they slant the same way and are level with the straight of grain.*



Joining bias strips. *To maintain the stretchiness, the seams joining strips must lie on the straight of grain. Place the strips at right angles to each other, with right sides together and short edges level. Tack and stitch, taking 6mm ($\frac{1}{4}$") turnings. Press open the seam and trim off the protruding corners.*





Paints, brushes and painting

Paint is the most versatile of finishes used for decoration. It is available in almost any colour you care to choose, so any object can fit precisely into your colour scheme. And it is the easiest of finishes to change if, at a later stage, you decide to redecorate.

To get a perfect painted finish on new wood requires some care, especially in preparation, but it is not difficult if you follow a few guidelines. Also, because paint is opaque, it has the advantage over any clear finish in that it conceals any unsightly blemishes in the wood. A beautifully grained wood, however, should never be covered up. Resist the temptation to paint everything in sight but remember that good painting, with the right preparation, can rescue the appearance of a piece of wood where bad workmanship would otherwise be obvious.

Choosing paint

Nowadays there is an àlmost bewildering choice of paints available in any hardware shop; the one you choose will depend on the effect you want and on the surface to be painted. If a very hard finish is needed check the durability of the paint—whether it will resist heat or alcohol or scratches.

Acrylic emulsion paints give either a matt or a semi-gloss finish. They are based on resins but can be thinned with water. (Suitable for most surfaces.)

Oil-based paints have largely been replaced by paints based on alkyd resins. These are the most common paints for wood and are available in a huge variety of colours—matt, gloss or semi-gloss (also known as eggshell or lustre).

Thixotropic or non-drip paints have become common since the mid-1960s. They come in a jelly form and should not be stirred or thinned or they will turn to liquid for about one hour. They give a thicker layer than liquid paints (almost twice as thick) and are especially useful for re-painting in a different colour. On a previously painted surface one coat may be all that is needed but on new wood priming is essential and undercoating is strongly advised.

Emulsion paints are water-borne which makes it easier to clean brushes and to remove any small splashes. They can be thinned with water but this is not usually necessary. These paints give a matt finish and are most suitable for walls and ceilings—not normally for wood except as an undercoat. Since emulsion comes in a wide range of colours, however, you may want to use it on wood. If you do, cover with a thin coat of polyurethane varnish for durability.

Transworld

A study in blue. Choose deep colours for a rich and satisfying effect.

Beckers

Introduce colour into a child's room with bright, painted furniture. Choose primary colours for a lively effect.

Preparing paint

Buy only as much paint as you need for the job. Careful storage will preserve paint but a newly opened paint is the easiest to work with. Pigment tends to settle during storage so it is a good idea to turn the tin upside down a day before you use it to help it mix—this does not apply to the thixotropic paints.

Open the tin by prising off the lid gently at several points to avoid bending it. To avoid building up paint around the top of the tin always work from a paint kettle unless using thixotropic paints. An old tin will do as a paint kettle.

Pour enough paint into the kettle to cover half the bristles on the brush. If there is a skin on the paint run a stick round the edge and lift it out in one piece. If necessary strain the paint through a piece of muslin or an old nylon stocking to catch any bits of skin.

When enough paint is poured replace the lid for an airtight seal. The best way to do this is to hammer it shut with a block of wood slightly bigger than the tin so that the lid is not distorted. All paints should be tightly sealed after use to prevent dirt getting into the tin. Even with a good seal, oil-based paints will form a skin on the top.

Choosing a brush

A good brush is a good investment—it will give better results than a cheap brush, it will be easier to use and it will last longer. Cheap brushes tend to be stiff which makes it difficult to avoid leaving brush marks. They also pick up less paint and so tempt you to immerse them more deeply in the paint and this results in the brush being clogged up, difficult to clean and likely to drop flecks of old paint on to the next painting job.

Beckers

Use various tones of one colour to pick out the different parts of a chair.

Cheap brushes also tend to shed bristles as you paint, at least a couple of which you may not notice until your otherwise immaculate surface has dried.

The way to tell a good brush is to check the bristles. These should be plump (to pick up enough paint), soft to touch (to avoid brush marks) and long (to give smooth application). The best brushes are made of natural bristle which is usually hair of boar or hog. Synthetic fibres are thinner and smoother and hold paint less efficiently. If in doubt the price of the brush is a good guide to its quality.

Paint brushes come in many sizes, some with unusual handles for getting into corners. For most indoor uses and large expanses of furniture a 5cm (2") brush is the easiest to handle; use a 2.5cm (1") brush for more detailed work such as drawer handles and narrow edges. Larger brushes—and rollers and sprays—are not appropriate for painting most wooden surfaces.

Before using a new brush prepare it by breaking it in. New brushes always shed some hairs and usually hold odd bits of dust and dirt. Flick the bristles against your hand to clear these out. Then wash the brush in warm, soapy water and rinse it thoroughly in clean water. Lay it flat to dry out. The first use for a brush should be on undercoat or primer so that any stray bristles that may fall out can be dealt with easily where they matter least.

Care of brushes is essential or they wear out and give shoddy work. It is always best to finish a coat of paint completely before breaking off work, even for a meal, as there will probably be an uneven result when you resume. But if you have to leave a job unfinished a plastic bag will keep the brush from drying out for up to an hour.

Clean brushes thoroughly when you finish painting. Working from the handle towards the tip, scrape off excess paint with the back of a knife. Clean emulsion brushes in water and a mild detergent, rinsing in clean water. Rinse other brushes in white spirit or a commercial brush cleaner. Scrape excess liquid from all brushes by wiping on the edge of a board, then pat with newspaper.

When completely dry wrap brushes in plastic bags to protect them and store them flat.

Proper cleaning of brushes does not take a great deal of time—and the effort will be repaid handsomely next time you paint.

Nelson Hargreaves

Fill in small dents and scratches with a filler and adhesive paste, applying thinly with a flexible scraper.

Preparing working area

Before starting work check the light. Daylight is best but if you have to work at night make sure that there is plenty of light. In dim light it is all too easy not to notice uneven patches while working, which will spoil the finish.

Protect the floor, table-top, or surrounding furniture, with newspaper or dust-sheets. Do not wear woollen clothes or loose fibres may settle on the paint.

If the object to be painted has knobs or handles remove these before starting work. If painting drawer fronts remove the drawers and stand them on end—it is easier to paint a horizontal surface than a vertical one. Rest the object on wooden blocks or bricks to hold it just clear of the floor or table. This prevents the brush picking up dirt when painting the bottom edge.

Preparing wood

Careful preparation of the wood is the first step to successful painting. The surface of the wood must be clean and smooth (see Renovation 1, page 184). If there are any knots, these must be sealed to prevent resin from 'bleeding' through the paintwork. Paint knots with a thin coat of commercial, shellac-based knotting and leave to dry. Shellac is a resinous substance used as a finisher and sealer. If the wood is smooth and in good condition, sanding down may be all the preparation it needs before applying a primer. If, however, it has small dents or hair cracks, especially if it is a coarse whitewood which may swell when moistened, you should seal it to smooth the surface.

To make your own sealer, make a paste from 28gm (1oz) of a cellulose wood filler, such as Polyfilla, and an equal volume of PVA adhesive, mixing with water to the consistency of cream; otherwise use a ready-made mixture known as spackle, eg Fine Surface Polyfilla. Apply the mixture to the wood with a flexible scraper as thinly as possible. Work both with and across the grain on a small area at a time. Leave for an hour or so to dry and sand down lightly with grade 0 glasspaper.

Priming

The function of priming, the first of the three stages of painting, is to bind loose particles together, seal the surface and form a tough, non-porous base for the undercoat. Previously painted wood will not need priming unless it has been completely stripped. All new wood needs a primer.

Pour enough primer into the paint kettle to cover half the depth of bristles —you should never have more paint than this in the kettle to avoid overloading the brush. Dip the brush into the primer and wipe off any surplus on the inside of the kettle. Brush the primer firmly along the grain of the wood to give a thin but even coat.

Leave the primer to dry for 24 hours. Remember to clean the paintbrush and kettle when finished.

When the primer is dry rub it down lightly with grade 0 glasspaper, working along the grain of the wood. Wipe off the dust with a rag slightly dampened with white spirit.

Undercoating

The object of undercoating is to produce an evenly-coated, smooth surface as a base for the top coat. When painting white it is best to give two undercoats; for colours, one undercoat will do.

Dip the brush to one-third the bristle length and wipe off any surplus on the inside of the kettle or on a wire strung across the top. Beginners often make the mistake of dabbing on too much paint too lightly which leaves ugly, sagging marks. The right approach is to make the paint spread as far as you can while still looking even in colour.

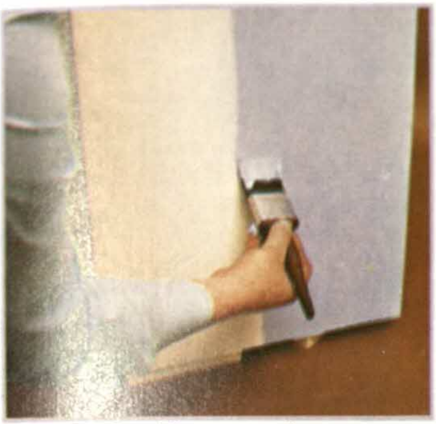
Paint first with the grain of the wood, holding the brush firmly and only lifting it where it naturally rises at the end of a stroke—a stroke should be 30cm-45cm (12″-18″) long. Before reloading the brush, press more lightly and work over the same area against the grain. This will eliminate the first brush marks.

Finally, 'lay back', ie hold the brush almost flat with the surface and brush very lightly so the bristles barely touch the painted area; work with the grain and away from the newest edge of the paint (the 'wet' edge) towards the previously painted area.

Do not paint on top of the existing wet edge. Start a brushload away from it and work back towards the painted area. This avoids a build-up of paint in any one place which would cause an uneven effect.

Be careful with edges—they can catch the tip of the brush. Avoid this by stroking towards edges rather than away from them. If a run does start, wipe the paint off the brush and pick up the run by pushing at it instead of drawing the brush over it. If any stray bristles appear pick them up by pushing at them with the brush.

Allow 24 hours for the undercoat to dry (2 hours for an acrylic undercoat). If there are any pimples or obvious brush marks, sand them off with grade 1 glasspaper and then wipe off the dust. If the undercoat colour is uneven this may affect the top coat so repeat the procedure with a second undercoat. Remember to clean brushes and paint kettle when you finish.


Nelson Hargreaves

Paint firmly with even strokes.

Topcoating

Gloss paints are thicker than undercoats and so need to be applied more firmly although the final, laying-off strokes should be, if anything, even more delicate. The technique is basically the same.

Make sure that a new brushload meets the previous wet edge while it is wet and not tacky because runs start more easily with gloss paint. The shiny surface of gloss paint can look deceptive in poor light—do the top coat in daylight if at all possible.

Thixotropic paints need a rather different technique to get the benefits of their jelly-like consistency. They should not be stirred and must be used straight from the tin. The coat will be much thicker than liquid paints (nearly twice as thick) and the result will be very hard-wearing.

Dip the brush into the tin but do not wipe off any paint. Use strong, simple strokes and do not work over the surface too much—thixotropic paints do not flow like conventional paints and too much brushwork will produce thin patches.

The paint surface tends to harden very quickly so the secret of success is to work quickly. Keep dipping into the paint so you have a full brushload. If there is not enough paint on the brush the paint will pull as it is applied, giving a patchy surface. Too generous an application may give delayed 'curtains' and runs which don't become apparent until the paint is half-dry. Practice is needed to gauge the right amount of paint.

For a hard-wearing finish you can use a second coat. Allow at least a week between coats so that the first coat can cure properly. Rub down the surface with dry, grade 400, wet and dry paper and then paint the second coat. If you are decorating your craft with a patterned overlay then follow the same procedure.

Maison de Marie Claire/Galland

No need to stick to one colour. This dresser looks pretty in several shades.

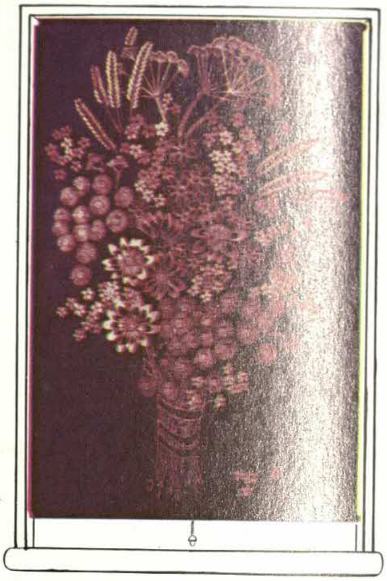
Designing with bleach

Colour — dyeing 4

Bleaching is a way of decorating dyed fabric and paper by removing areas of colour with bleach. With this very simple process you can create marvellous patterns with a pen or stamping tool in your own home and without any elaborate equipment. The colour on the fabric or other material miraculously disappears and you can see your picture, pattern or lettering arise just as the image on a photograph is developed in chemicals.

It is a fascinating process and *with proper supervision* older children can enjoy it too, spending hours making pictures and patterns or writing friends' names on squares of dyed muslin. The cloth can later be used to make garments or decorations for a child's room.

Bleach dyeing, also called discharge dyeing, can be used creatively at any level and designs of remarkable beauty and originality are possible. The design for a roller blind in the illustration was made using bleach on dyed paper and is a good example of the scope possible because it shows the variation of tone that can be made by using different strengths of bleach. This is where the art of bleaching lies—in working with the variations in the depth of dyes to get several shades of one colour.



Janet Allen

An idea for a bleached roller blind.

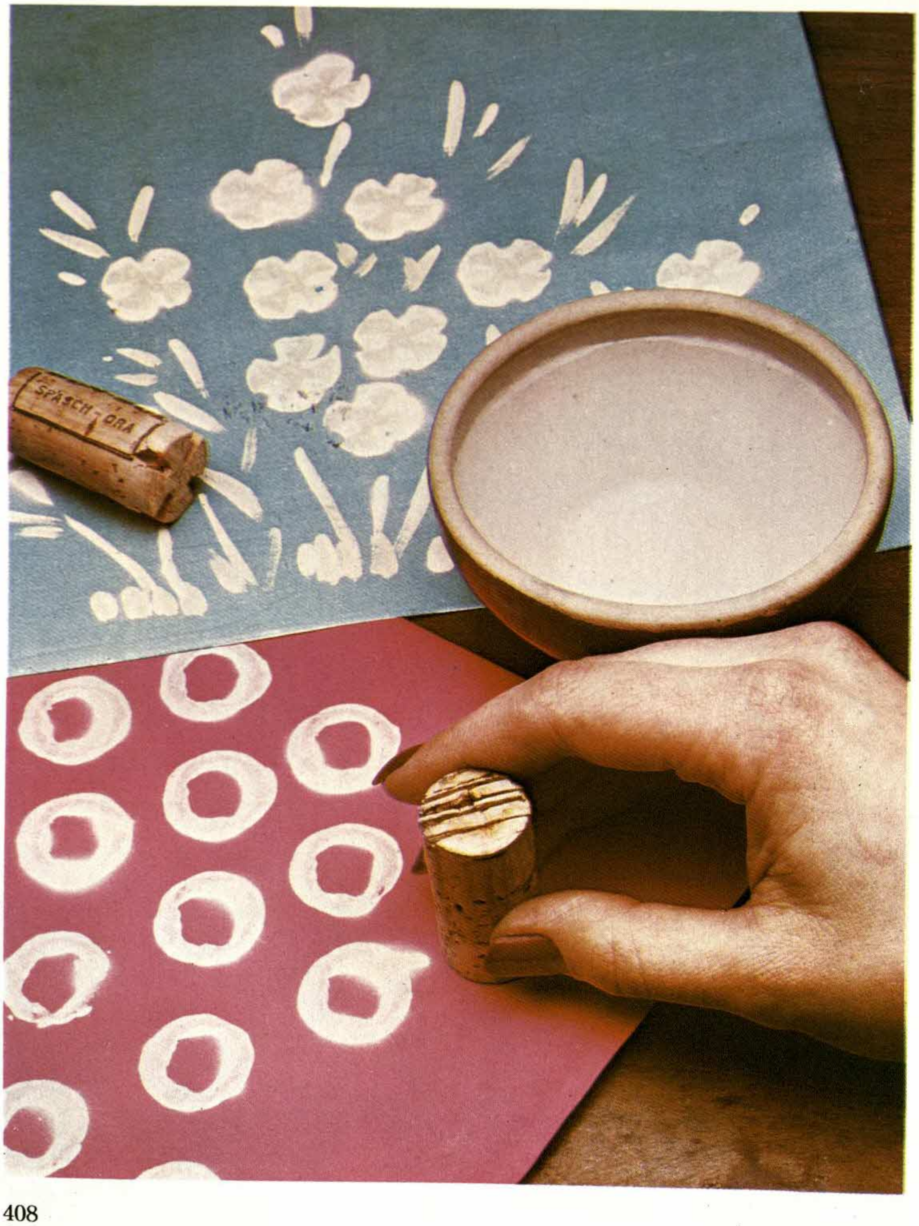
What will bleach

Bleach can be used on both fabric and paper but whether it is successful or not depends on the type of dye present. Almost any item dyed at home with hot or cold water dyes will bleach, but on the whole cold water dyes give a crisper contrast to cloth when bleached. Also, yellow-based dyes, like orange, green and brown, tend to strip to a cream or beige rather than dead white. All dyes carry clear instructions on the packet and state which fibres they will dye. (For additional information on hot and cold water dyes see Dyeing chapter 1, page 150.)

Cloth which has been dyed commercially can often be bleached, but again this depends on how it has been dyed originally. It is impossible to know what the dye is or if it will bleach unless a sample test is made.

To make a spot test, choose an area where any resulting damage to the fabric will matter the least—a neck lining, seam turning or hem.

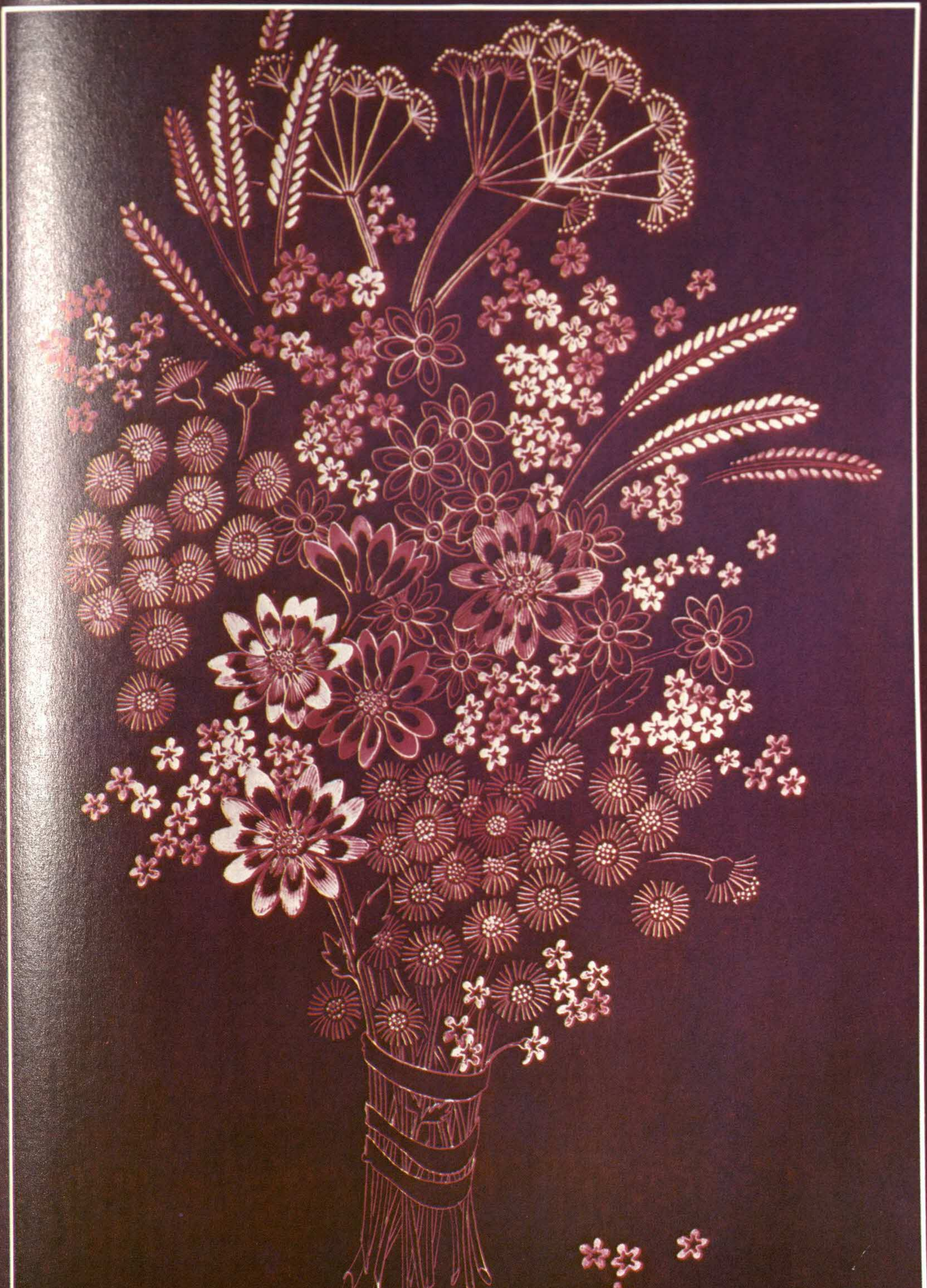
Coloured tissue paper will bleach and, occasionally, other papers, but they must be spot tested first as for cloth.

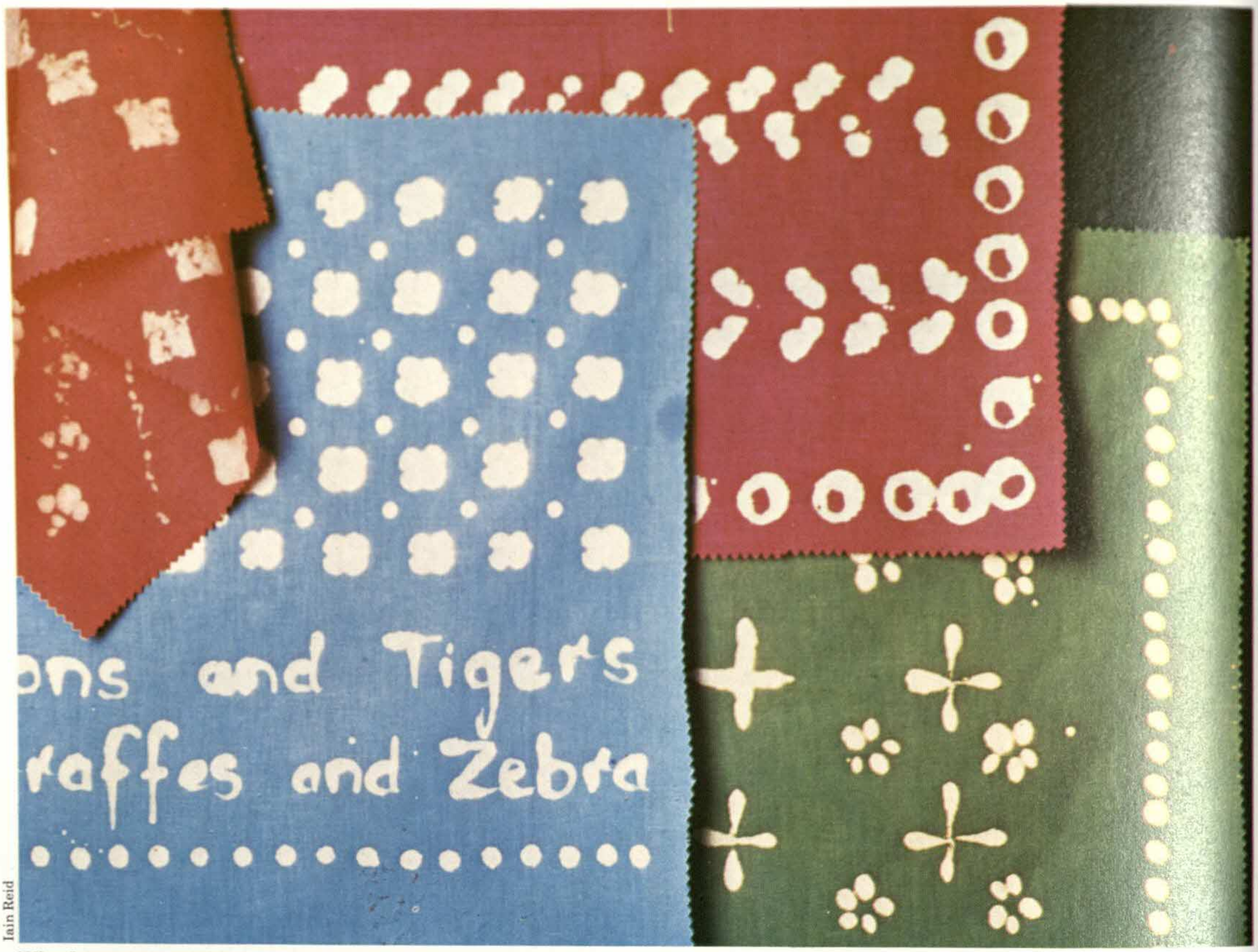


Iain Reid

Left: corks cut into shapes and dipped in bleach will pattern paper or cloth.

Right: flowers drawn on dyed paper with bleach by Janet Allen. Shading is done with various strengths of bleach.





Iain Reid

Brightly dyed cotton squares have designs made in bleach using the patterned corks, sponge and keys on right. Writing is made with a nail.

Whether you are bleaching paper or cloth, if you dye it yourself first you can be sure of getting the colour you want and you will know that it is going to bleach successfully.

Follow the instructions on the dye packet and take care to choose a colour that is rich enough to provide a good contrast. Rinse or wash well after dyeing to get rid of any excess colour that might bleed on to bleached areas later on.

All fabrics should be thoroughly washed before dyeing to get rid of any 'dressing' (stiffening put in by the manufacturer to improve the appearance and weight of the cloth).

Although many different fabrics accept dyes and bleach, thin fabrics are best and cotton is probably the best of all, especially for beginners.

Bleach

Household bleach will take colour out of a wide variety of materials but it is important to bear in mind that it is very potent and can cause damage to some fibres in much the same way as acid. Therefore, it should always be diluted to the weakest solution which will take colour out.

Bleaches differ in strength so test the one you intend to use by practising on an odd scrap of material. Try diluting one tablespoonful of household bleach with three of water and test it. Then add another two tablespoonfuls of water which will give you a one-to-five solution. Test again. Then add another two tablespoonfuls which will give you a one-to-seven solution, and so on until you find the weakest solution that will work to remove all the colour or, if you wish, only part of it, to produce shading.

Household bleach will remove colour from hot and cold water home dyes and many commercial dyes as well.

Note. Household bleach is very dangerous if swallowed and if children are to use it make sure they are aware of this and old enough to appreciate it. Never let children work with full strength bleach but dilute it thoroughly first. Take great care to keep bleach away from eyes and skin. If you do get some on you wash it off immediately with cold water.

Decoration

Bleach can be applied either with improvised stamping tools or a pen. Always bear in mind that the bleach will spread a bit and so will be slightly broader on the material than the application tool. To prevent this, especially when using stamping tools, a dye thickener such as Paintex can be used (mixed with boiling water) to make the bleach less runny.

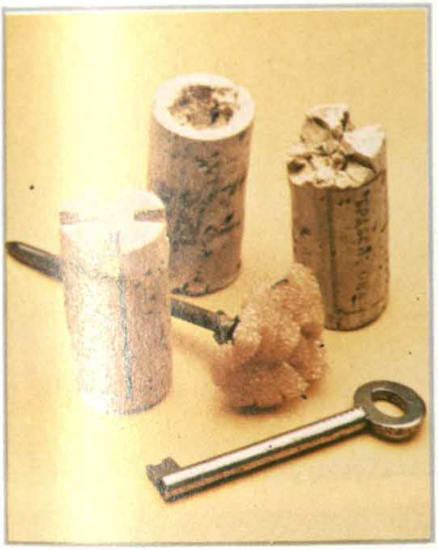
Stamping tools can be anything which is easily held in the hand and will hold just a little of the bleach—a cork, cut potato or carrot, a small off-cut of wood, or a piece of firm plastic sponge. This last tool can be gummed on to a cotton reel for firmness and cut to more elaborate shapes too, but generally simple shapes are best as the bleach runs a little differently each time and the repetition of one simple motif will provide its own unique variations. Rectangles can be made with the edges of a cardboard box, eg a match-box.

The long edge of a ruler makes fine stripes and the short end makes interesting blobs.

If a piece of fabric is to be decorated with stamped motifs consider the fabric's use and where the pattern—if there is one—should lie.

You can place a design down the edge or along the bottom of curtains, round the neck or at the ends of sleeves on a dress, or with stripes running diagonally up and down.

The size of the stamping tool should be thought of in relation to the area on which it will be used. You can draw round the shape of the dyed fabric or garment on a piece of shelf paper or old brown paper and work out your design before you begin by using an inked office stamping pad, some childrens powder paint or a thick starch paste with a few drops of food colouring in it. But much of the fun of bleaching is to work spontaneously, stamping impromtu designs or using a pen to create freehand drawings and scrawls.


Iain Reid

Improvised stamping tools make a variety of unexpected printed shapes.

Pens. Drawing with a pen provides the greatest freedom for using bleach and you can experiment with different nibs for making broader or thinner lines.

Doing ordinary handwriting is a good way to start. A pair of kitchen curtains with recipes written all over them in your own hand is very effective. Letters or greetings written by each member of the family on fabric, made into a quilt cover or cushion, makes a memorable gift for grandparents and other relations.

Pictures can be drawn with bleach on to cloth or paper or they can be outlined in chalk then drawn over with bleach, and shaded to accentuate the designs with different consistencies of diluted bleach.

How to apply bleach

Protect your working surface by covering it with plastic or other material (keep the large bags you get from the cleaners or from mattress covers, for this purpose). On top of the material put about four thicknesses of newspaper covered with a layer of white kitchen paper, in case bleach goes through the material.

Have your diluted household bleach in a container which is wide enough for you to dip in all your stamping tools. For shading you will need more than one container filled with different strengths of bleach.

Spread out the material you wish to decorate, steadying it if possible by corner weights or by pinning it through the newspapers. If the material is doubled then put plastic between the layers so that bleach will not penetrate through. Do not use newspaper next to the material; newsprint may come off on to your fabric.

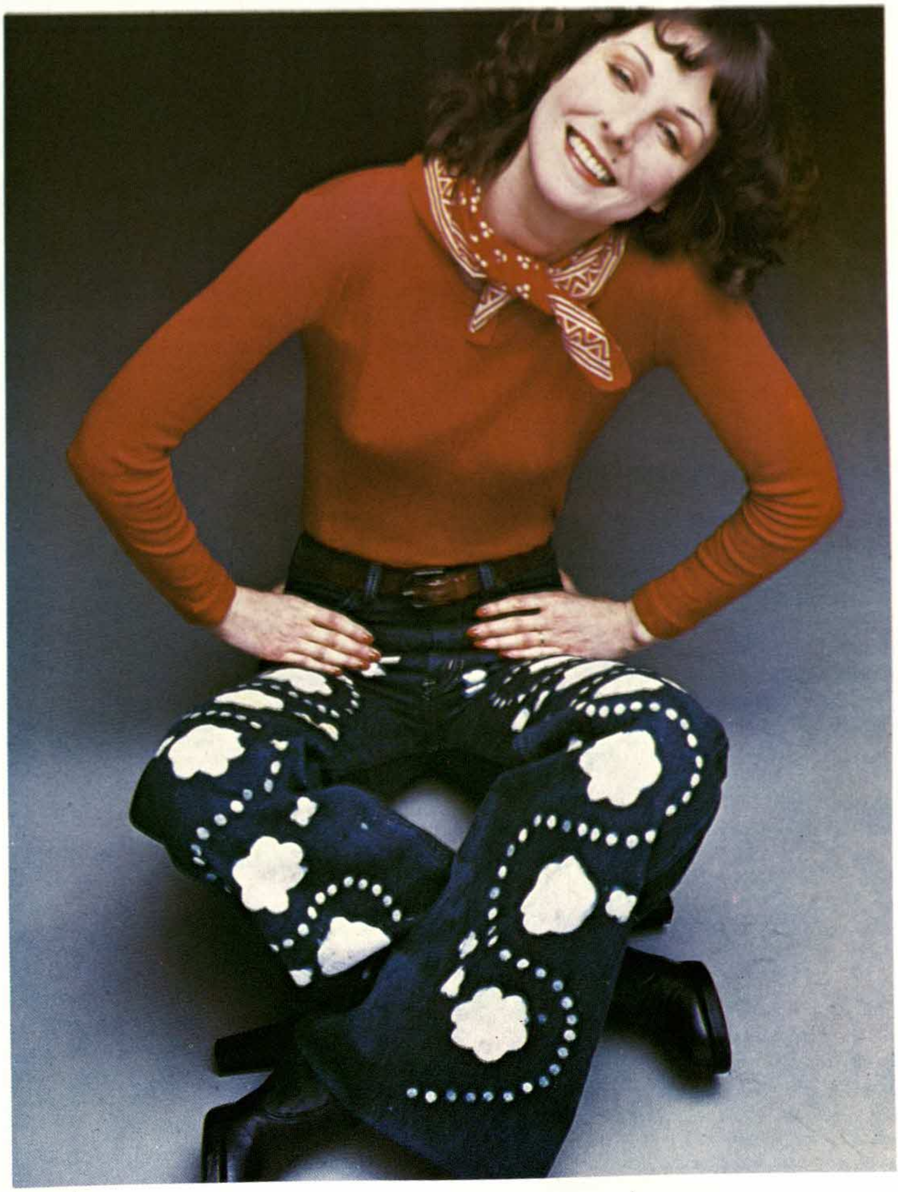
To stamp dip the stamping tool just under the surface of the bleach, hold it over the bleach container to drip briefly and then press it on to the fabric or paper for a moment. The shape will emerge almost at once.

Dip the stamping tool in bleach between each stamping and you will find that you develop a rhythym of dip, drip, stamp, dip, drip, stamp.

Slightly absorbent stamping tools hold bleach better and are easier to work with since they are less likely to drip and mark the material in the wrong place.

There is less chance of dripping if you use a pen because it is designed to hold liquid, but as bleach is somewhat thinner than ordinary ink, it is wise to hold a paper towel under the pen as you bring it across the material after dipping it in the bleach.

Jeans are ideal for bleaching and results are always very individual.


Steve Bicknell

Beginning mosaic work

Mosaic 1

Mosaic is the craft of making designs and pictures by imbedding innumerable small stones into a surface. It is so ancient a craft that no one really knows the meaning of the word, so modern a craft that even Picasso was happy to design for it.

The origins of mosaic go back to the very beginnings of civilization and early examples are found in many materials throughout the ancient world—lapis lazuli in Mesopotamia, ivory and glass in Egypt, colourful stones and pebbles in Greece. But it was the Romans, borrowing from the Greeks, who first developed the use of mosaic as decoration. Using the beautiful marble for which Italy is still famous, they made mosaic floors in their baths, fountains, homes, public buildings and squares. Even today any and all stones used in mosaic work are called *tesserae*, a word of Latin origin (probably meaning four-sided).

Today, glass is the favourite material for making mosaics. In about the 3rd century the Italian Christians discovered the wonderful colours and effects of light refraction that glass offers when cut into squares, called *smalti*, and used in mural rather than floor decoration.

The early Christians discovered how to produce gold *smalti* so that artists might show the supernatural aura surrounding the Deity. Thus arrived that lustrous and magical effect produced by gold which distinguishes Christian mosaics of the 5th century onwards from all that went before.

Gradually the use of gold *smalti* spread until, in 6th-century Ravenna, it became the entire background. The play of colour and light, the mixture of semi-precious stones and glass, the sheer life that these mosaics have when seen shimmering on the walls of a darkened church is unparallelled anywhere in the world.

Traditional materials

Gold *smalti* were made in Ravenna, as they are made today, by fusing a thin layer of gold leaf between two pieces of glass, but the methods of applying them have changed. Originally a plaster of slaked lime and sand was applied to a wall and the artist, called the 'imaginary' in old documents, came and drew his previously prepared design in the wet plaster. Trained workers then laboriously put in row after row of smalti where the artist's outline indicated.

Present-day building schedules do not allow for artists and their assistants to sit around on scaffolding for several years, so craftsmen must lay out the whole mosaic on sections of paper and fix them into the wall in large blocks as quickly as possible.

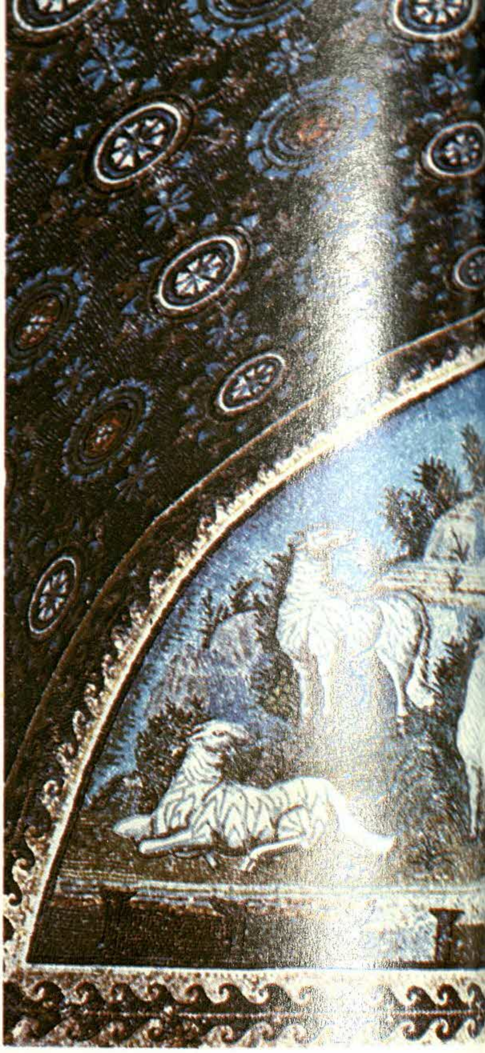
Beginning mosaic work

Obviously it is beyond the scope of the beginner to try to reproduce in *tesserae* any of the mosaics illustrated here, but it can be done with remarkable ease using paper. This makes a handsome decoration as well as giving a genuine sense of the mosaic technique—the pleasure of it and the problems that the craftsman must solve, such as the use of colour, shaping of squares to fit the design and, very important, the sense of correct spacing.

Copying a Ravenna mosaic

First study the detail of the ceiling from the tomb of Galla Placidia, then look at the line drawing and photograph overleaf.

Basically the design is a multi-petalled flower surrounded by six circles and two alternating leaf motifs. It is really quite simple and this is the first thing about mosaic that beginners should understand: the basic design, whatever the project, needs to be strong and simple. The quality of the finished work will come from the colour and texture.

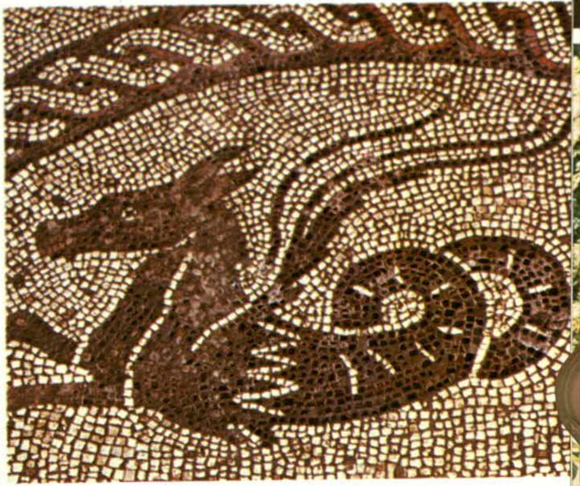


Sonia Halliday

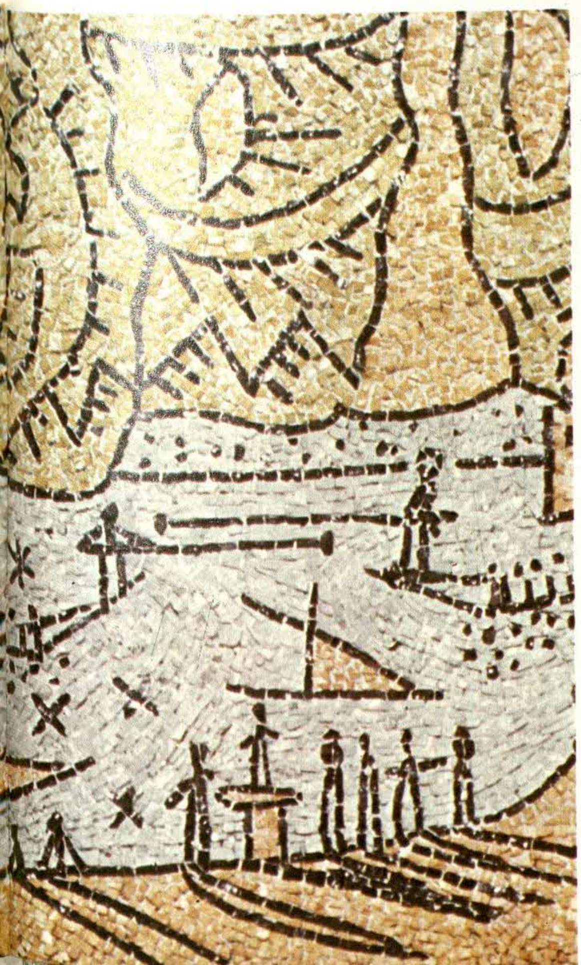
Hjalmar Boyesen

Mosaic has been used throughout the ages for pictorial and patterned decoration of walls, ceilings, floors. Top, left and right are vault and ceiling details of one of the most famous mosaics, the 6th-century tomb of Galla Placidia in Ravenna. Middle right is a precursor, a detail of a Roman floor in Britain. Below it is a mosaic pavement from an Italian basilica in north Italy. But the art of mosaic is far from dead; at lower left is a mosaic picture designed by Picasso and made by mosaic craftsmen, Hjalmar Boyesen.

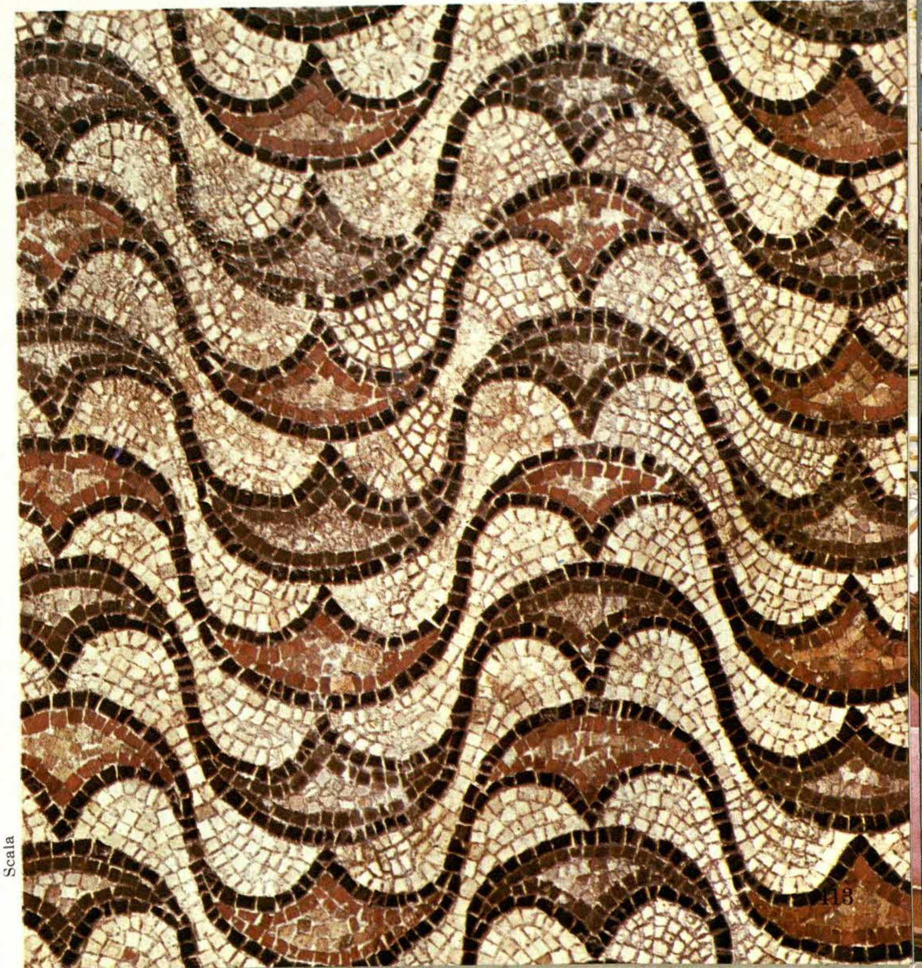
Scala

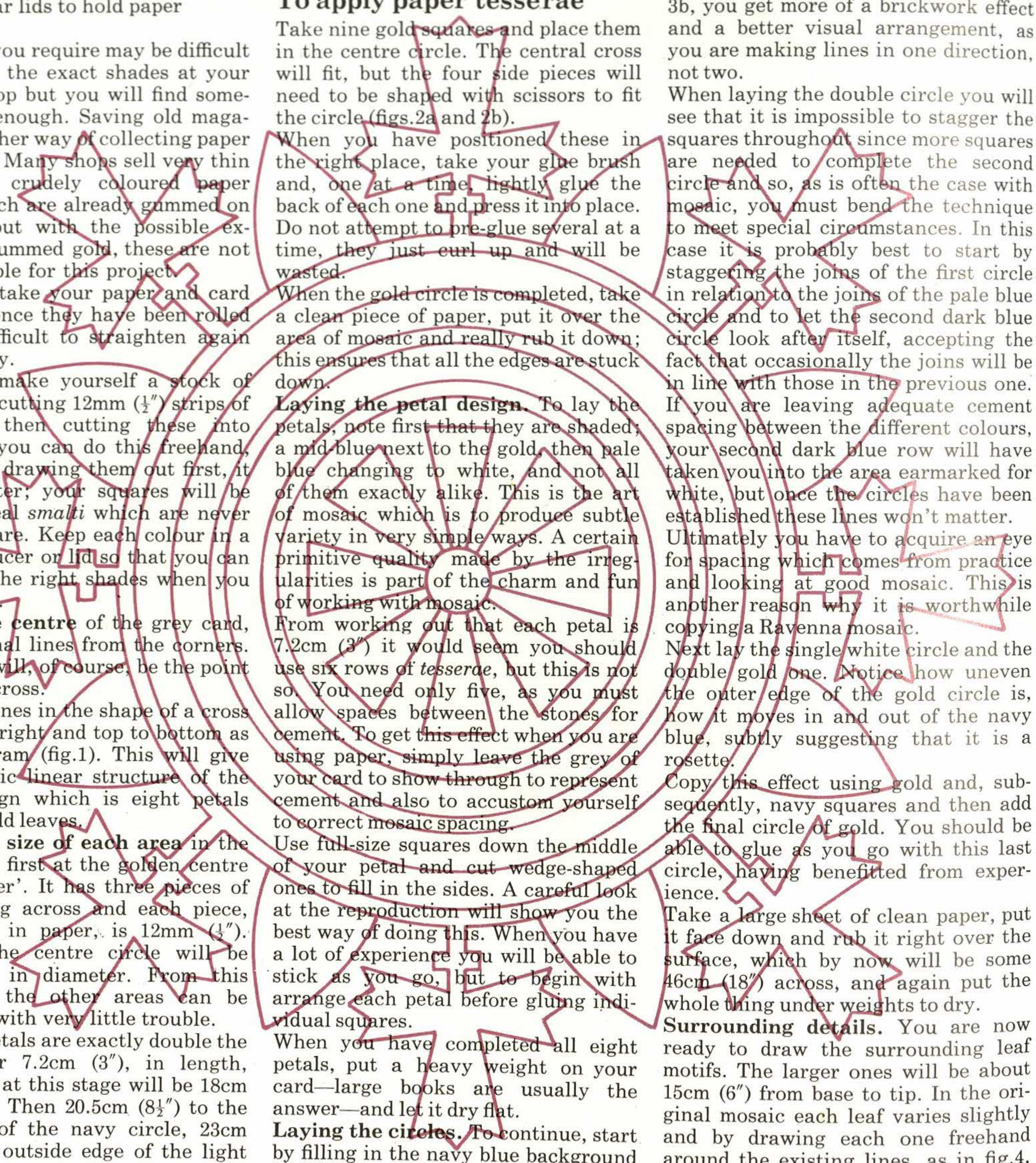


Michael Holford.



Scala





Materials you will need:

- Paper—white, gold and five shades of blue.
- Strong grey card, at least 81cm (32″) square, for backing.
- Paper glue and applicator.
- Scissors.
- Saucers or jar lids to hold paper squares.

The paper you require may be difficult to obtain in the exact shades at your local art shop but you will find something near enough. Saving old magazines is another way of collecting paper for mosaics. Many shops sell very thin and rather crudely coloured paper squares which are already gummed on the back, but with the possible exception of gummed gold, these are not really suitable for this project.

If possible, take your paper and card home flat; once they have been rolled they are difficult to straighten again satisfactorily.

To begin, make yourself a stock of 'mosaic' by cutting 12mm (½″) strips of paper and then cutting these into squares. If you can do this freehand, rather than drawing them out first, it will be better; your squares will be nearer to real *smalti* which are never exactly square. Keep each colour in a separate saucer or lid so that you can easily find the right shades when you are working.

To find the centre of the grey card, draw diagonal lines from the corners. The centre will, of course, be the point where they cross.

Now draw lines in the shape of a cross from left to right and top to bottom as in the diagram (fig.1). This will give you the basic linear structure of the mosaic design which is eight petals and eight gold leaves.

To find the size of each area in the design, look first at the golden centre of the 'flower'. It has three pieces of mosaic going across and each piece, already cut in paper, is 12mm (½″). Therefore the centre circle will be 36mm (1½″) in diameter. From this simple fact the other areas can be worked out with very little trouble.

The white petals are exactly double the diameter, or 7.2cm (3″), in length, so the work at this stage will be 18cm (7½″) across. Then 20.5cm (8½″) to the outer edge of the navy circle, 23cm (9½″) to the outside edge of the light blue circle, 28cm (11½″) to the outside of the double circle, 31cm (12½″) to the outside of the white circle, and so on.

Before you begin to apply the paper *tesserae* you will want to pencil in a basic outline of the circles and petals. This can be done using a ruler and a compass to draw the circles, but it is best, when working with mosaic, to cultivate a freehand approach as far as possible. Your outline should be a guide not a precise statement since mosaic is not laid by precision methods and spacing will cause considerable variation in the original outline. Also your aim is to get the feel of mosaic and not to do an accurate museum copy.

To apply paper tesserae

Take nine gold squares and place them in the centre circle. The central cross will fit, but the four side pieces will need to be shaped with scissors to fit the circle (figs.2a and 2b).

When you have positioned these in the right place, take your glue brush and, one at a time, lightly glue the back of each one and press it into place. Do not attempt to pre-glue several at a time, they just curl up and will be wasted.

When the gold circle is completed, take a clean piece of paper, put it over the area of mosaic and really rub it down; this ensures that all the edges are stuck down.

Laying the petal design. To lay the petals, note first that they are shaded; a mid-blue next to the gold, then pale blue changing to white, and not all of them exactly alike. This is the art of mosaic which is to produce subtle variety in very simple ways. A certain primitive quality made by the irregularities is part of the charm and fun of working with mosaic.

From working out that each petal is 7.2cm (3″) it would seem you should use six rows of *tesserae*, but this is not so. You need only five, as you must allow spaces between the stones for cement. To get this effect when you are using paper, simply leave the grey of your card to show through to represent cement and also to accustom yourself to correct mosaic spacing.

Use full-size squares down the middle of your petal and cut wedge-shaped ones to fill in the sides. A careful look at the reproduction will show you the best way of doing this. When you have a lot of experience you will be able to stick as you go, but to begin with arrange each petal before gluing individual squares.

When you have completed all eight petals, put a heavy weight on your card—large books are usually the answer—and let it dry flat.

Laying the circles. To continue, start by filling in the navy blue background as you did for the petals, pre-cutting your wedges, gluing a section at a time and pressing it down as you go.

Then tackle the pale blue circle, spacing out the squares and leaving room for cement. When you have what seems to you a good, even spacing all the way round, glue the squares into place.

Staggering the spacing is one of the constant problems in mosaic and it arises when you come to the double blue circle. If you place the squares accurately in line with each other, as in fig.3a, you get lines running through both ways and also more cement showing because there is more space to fill in the second ring.

But if you stagger the joins, as in fig. 3b, you get more of a brickwork effect and a better visual arrangement, as you are making lines in one direction, not two.

When laying the double circle you will see that it is impossible to stagger the squares throughout since more squares are needed to complete the second circle and so, as is often the case with mosaic, you must bend the technique to meet special circumstances. In this case it is probably best to start by staggering the joins of the first circle in relation to the joins of the pale blue circle and to let the second dark blue circle look after itself, accepting the fact that occasionally the joins will be in line with those in the previous one. If you are leaving adequate cement spacing between the different colours, your second dark blue row will have taken you into the area earmarked for white, but once the circles have been established these lines won't matter.

Ultimately you have to acquire an eye for spacing which comes from practice and looking at good mosaic. This is another reason why it is worthwhile copying a Ravenna mosaic.

Next lay the single white circle and the double gold one. Notice how uneven the outer edge of the gold circle is, how it moves in and out of the navy blue, subtly suggesting that it is a rosette.

Copy this effect using gold and, subsequently, navy squares and then add the final circle of gold. You should be able to glue as you go with this last circle, having benefitted from experience.

Take a large sheet of clean paper, put it face down and rub it right over the surface, which by now will be some 46cm (18″) across, and again put the whole thing under weights to dry.

Surrounding details. You are now ready to draw the surrounding leaf motifs. The larger ones will be about 15cm (6″) from base to tip. In the original mosaic each leaf varies slightly and by drawing each one freehand around the existing lines, as in fig.4, you can get the same effect. If you prefer, however, you can draw one freehand and, using tracing paper, copy it in the other seven places. This applies also to the little blue leaf tips which are about 7.2cm (3″) in length and placed centrally between the gold leaves. When they have been sketched in, glue the gold leaves and then the blue ones, taking care to shade the two blue colours and to add a gold edge

Paul Williams

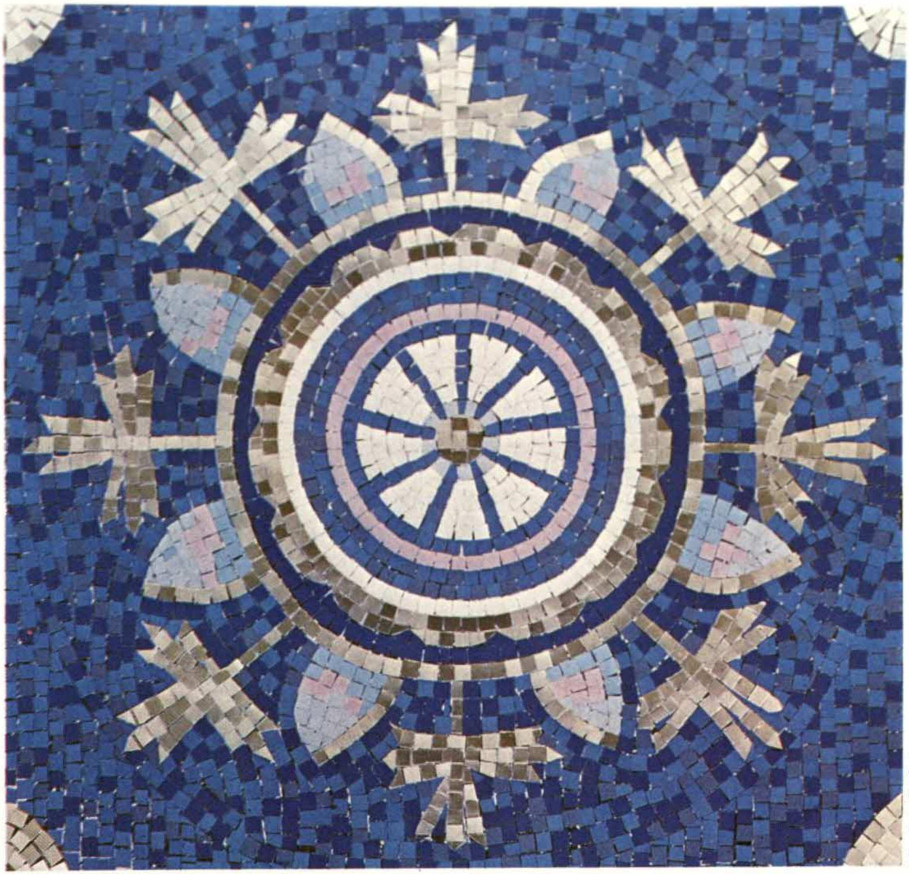
on the tip as illustrated. Press to dry.

The background. To fill in the background in dark blue, note how the squares start by following the circle pattern and then gradually, almost imperceptibly, ease out to run in straight lines. The best way to set the background is the most important part of the mosaic craft, and the Ravenna mosaic is a beautiful example.

To finish. The finished size of your mosaic depends somewhat on spacing, the drawing of the leaves and how much of the background you wish to include, but it is unlikely to be smaller than 79cm (31″) square. If the card you are using is larger than you wish to fill, after the mosaic is completely dry, shear off the edges with a trimming knife or, if the card is not too thick, scissors.

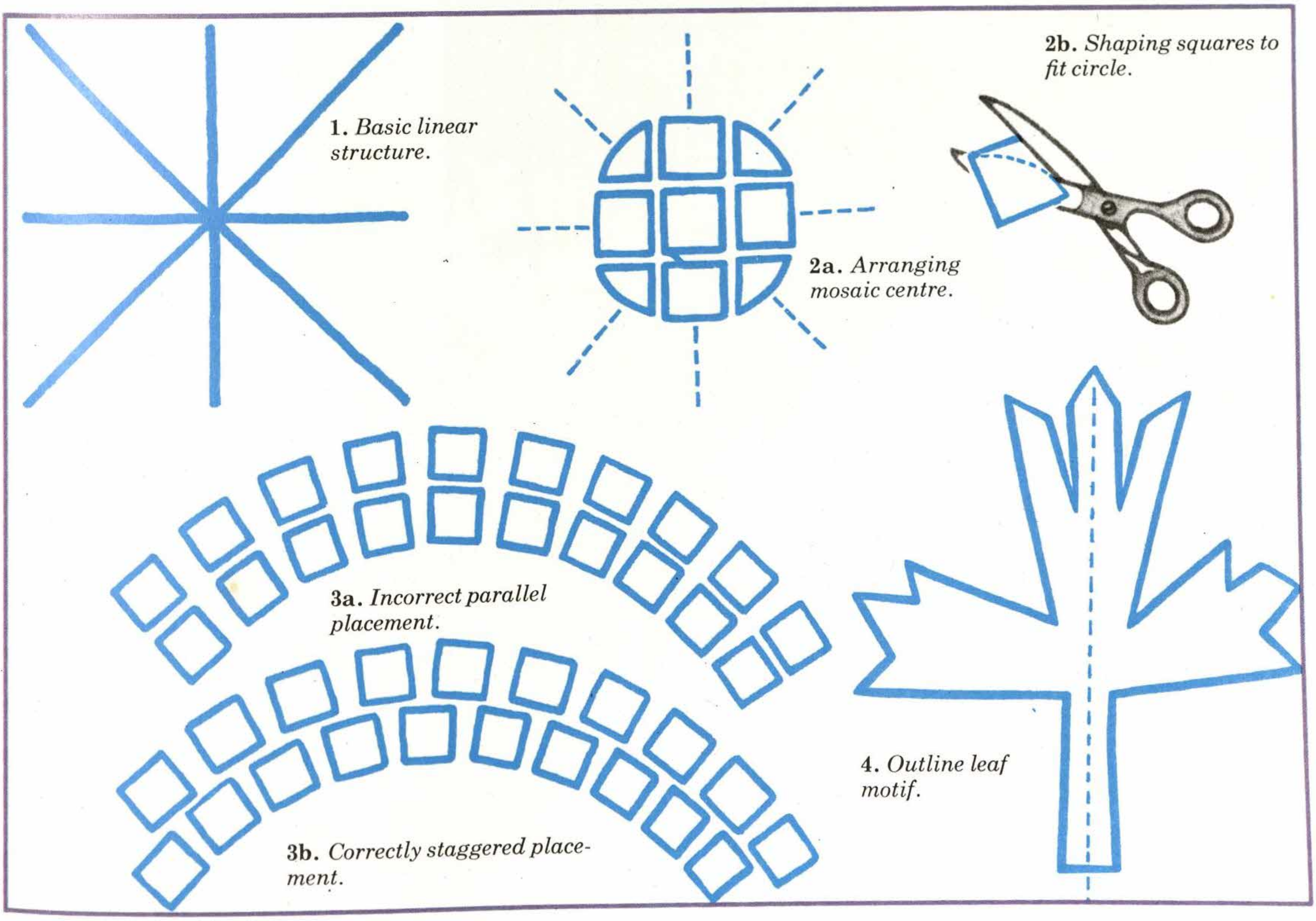
You can give more sparkle and glass-like appearance to the surface by using a paper varnish. The spray type, although more expensive, is the easiest to use. The varnish will also protect the surface if you want to use your mosaic as an improvised table centre for a party or some special display.

To protect your design in a more permanent way it can be framed and can then be used as a mosaic tray. It will even have one great advantage over a real mosaic, being lighter to carry.



Alasdair Ogilvie

Ravenna mosaic copied in paper is decorative and has a freshness all its own.



1. *Basic linear structure.*

2a. *Arranging mosaic centre.*

2b. *Shaping squares to fit circle.*

3a. *Incorrect parallel placement.*

3b. *Correctly staggered placement.*

4. *Outline leaf motif.*

Victoria Drew

Re-upholstering drop-in seats

Cloth — upholstery 1

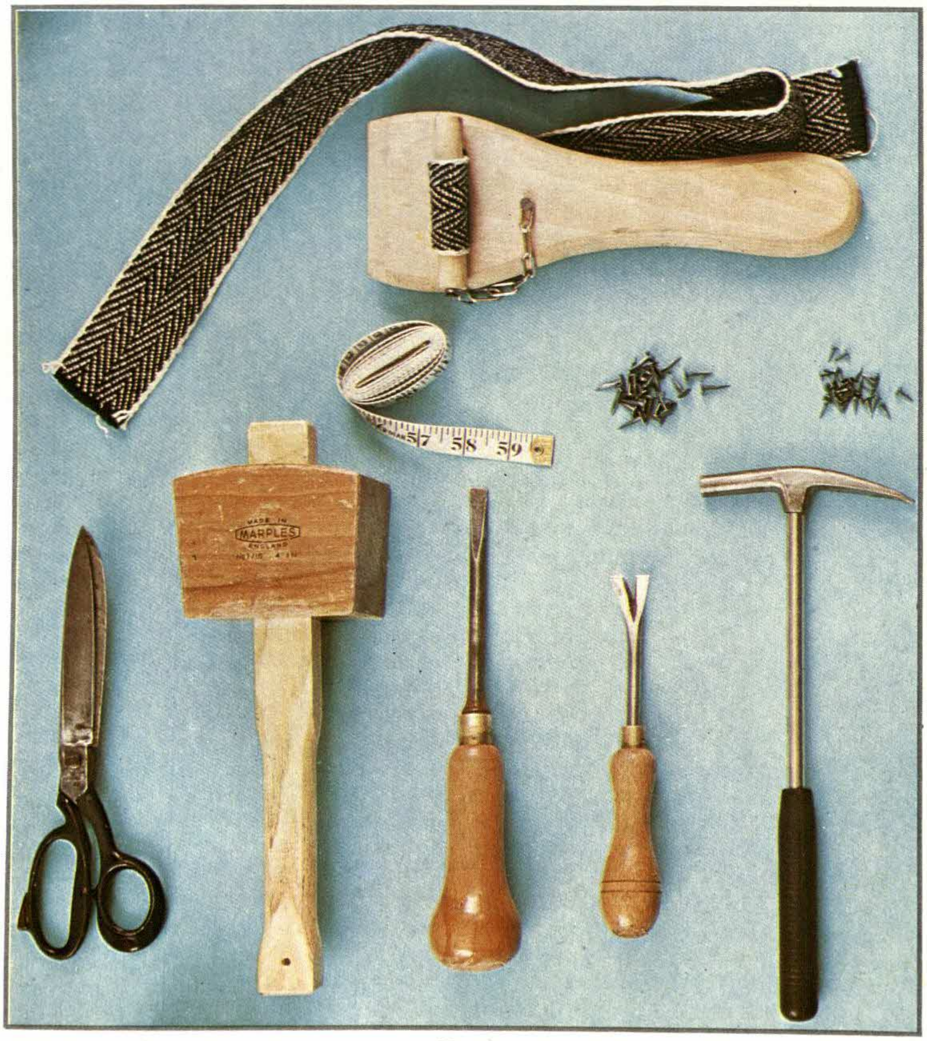
This and the following chapters on upholstery show how all kinds of chairs and even sofas may be stripped and re-upholstered to make attractive furniture which looks good and lasts for years. It does not matter if the seating is grubby, the springs bare or the stuffing is sagging. Any piece of upholstery can be made as good as new: dining chairs, fireside chairs, buttoned chairs, chesterfields and even padded headboards.

With modern materials such as foam rubber the craft of upholstery is made easier for the amateur. With a little practice and patience, you will be able to renovate all kinds of upholstered furniture, both traditional—stuffed and sprung—or modern. Some of the tools you will need are similar to carpenters' tools and most are quite simple to use.

The best introduction for the complete beginner is to re-make the drop-in seat of a dining chair. These chairs can often be bought cheaply in junk shops and usually need only a bit of work on the seat to bring them back into use.

Equipment

Tape measures are used for measuring off pieces of fabric etc.



Upholsterer's tools and equipment. Bottom row, left to right: shears, mallet, ripping chisel, tack lifter, cabriole hammer. Top: web strainer, tacks, tape measure.

Steve Bicknell

A shabby chair ready for a new seat.

Shears, which are really sharp, are essential for cutting out fabric and other materials such as webbing and hessian.

Mallet and ripping chisel for lifting the heads of tacks when removing old upholstery. The tip of the chisel is blunt to prevent damage to the frame and should always be driven in the direction of the grain and inwards from corners.

Tack lifter for pulling out the tacks once the heads have been lifted. Alternatively, you can use a pair of carpenter's pincers or pliers or the claw end of a hammer.

G-clamp, two for holding the chair base to the work surface.

Upholsterer's hammer with face of about 1.5cm ($\frac{5}{8}''$) and claw at other end. A reasonable substitute would be a carpenter's 'pin' hammer. A cabriole hammer is a specialized tool which is used for fine tacking along polished edges and carving.

Web strainer is used for stretching the webbing across the seat of the chair to prevent it from sagging. The simplest type of strainer is a piece of hardwood about 25cm x 7.5cm x 2.5cm (10"x3"x1"), slightly waisted for a good grip, with a groove at the end to give leverage (fig.1, left). Other more elaborate versions have a slot into which the webbing is inserted (fig.1, middle and right). Alternatively, a narrow piece of hardwood round which the web can be wrapped and pulled taut is efficient if you have a strong wrist.

Tacks are used to attach the various materials to the frame (nails should never be used). Use 1.2cm ($\frac{1}{2}''$) fine or 1.2cm ($\frac{1}{2}''$) 'improved' for a drop-in seat. 1.5cm ($\frac{5}{8}''$) tacks are used for the webbing on easy chairs.

Plastic wood for filling old tack holes if these are going to show.

Cloth-backed strong tape 4cm ($1\frac{1}{2}''$) wide and to the length of the perimeter of the chair seat plus 10cm ($4''$).

Adhesive with latex base for attaching the pad.

Webbing. This is placed across the seat frame in strands, running in both directions, and supports the padding. Most chairs have two strands each way (fig.2a), but the wide, early-Victorian type of chair may need three each way or two by three or four (fig.2b). To estimate the amount you need, slit open the fabric covering the underneath of the seat and buy enough to make the same arrangement.

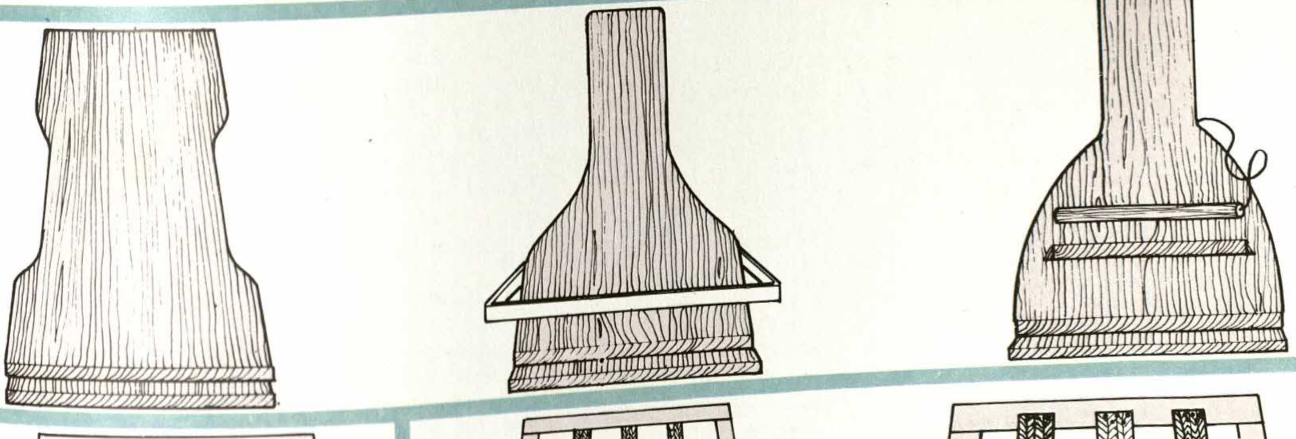
The highest grade of webbing is made from pure flax and is black and white with a twill weave. Other grades of black and white webbing are made from mixtures of jute and cotton or hemp, and sometimes linen threads are woven into the selvedges to strengthen them. Plain or striped brown webbing is a cheaper grade made from jute and is not recommended for dining chairs. Rubberized webbing, such as Pirelli, can be used but is more expensive.

Steve Bicknell

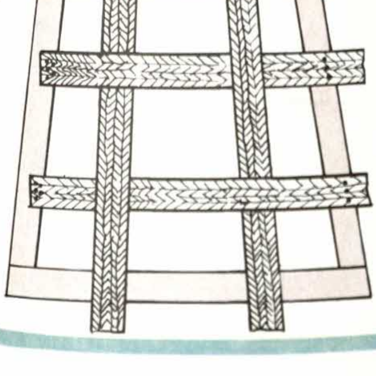
This re-upholstered chair has a new seat and is ready for many years of wear. Supplied by C.H. Frost Ltd.

1. *Different kinds of web strainer.* **2a.** *Two strands of webbing.* **2b.** *Some chairs need several webbing strands.*

1



2a



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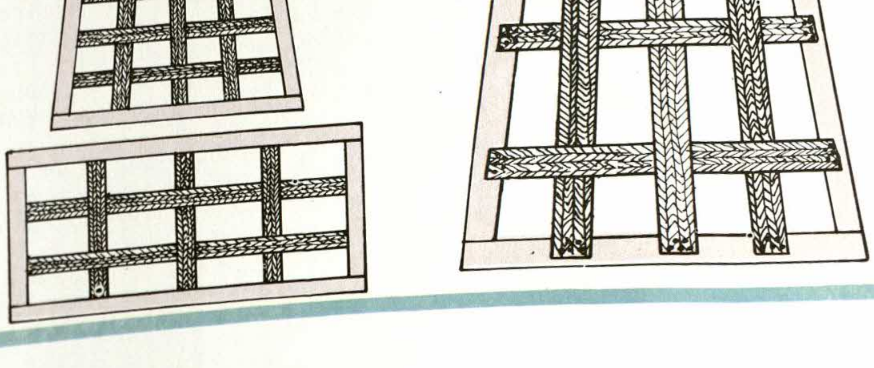


Maggie McNally

Padding. Foam biscuit, 1.2cm (½″) larger all round than the size of the chair seat x 5cm (2″) deep. Old dining chairs were usually stuffed with wool on horsehair but this is expensive, hard to find and difficult to use, and foam padding is perfectly suitable for the purpose. Latex (rubber), which comes in cavity, plain and pin-core sheets, is the best to use, but polyester foam is adequate and less expensive.

Calculating the fabric

For the main cover choose fabric which is hard-wearing, simple to clean and easy to work with. It should have a firm, close weave and be colour-fast. Fabrics with a smooth finish will keep clean longer than those with a pile or nap (velvet or needlecord, for example) which hold dust, cling to clothes, and have to be allowed for when the cloth is cut. Avoid using those fabrics which have a large pattern or motif which would need to be placed centrally on the seats and so be wasteful in material.

To calculate the amount of fabric needed for each chair measure the length and width of the seat (at the widest part) and allow a piece at least 15cm (6″) longer and wider so that the fabric can be turned over the seat frame. You will also need a piece of hessian and two pieces of linen (or calico) 5cm (2″) wider and longer than the seat.

Stripping the seat

Cover the work surface with newspaper, remove seat from chair base and secure the seat, upside down, to the work surface with G-clamps.

Using the ripping chisel and mallet start to drive out the tacks holding the bottom hessian and cover fabric. To do this, place the tip of the chisel behind the head of the tack and drive it out, working with the grain of the wood. Use the claw side of the hammer, or a pair of pliers or pincers, to pull it out completely. It is essential to work *with* the grain to prevent it from splitting.

Next, turn the seat over and remove the cover and stuffing. Cut any twine ties with scissors. Strip off the hessian and webbing in the same way. If there is no webbing and plywood has been used as a base, remove all the nails holding this.

As you work, note the way the webbing was originally placed, the side of the frame to which it was tacked, and the part of the frame which was uppermost when finished. Examine the frame carefully and remove all old tacks. If necessary treat wood worm with Rentokil or Cuprinol.

If the new covering fabric is thicker than the original, the frame should be planed down a little to compensate for the extra thickness.

Replacing the webbing

Space the webbing evenly as shown (fig.2a). If there is an uneven number of webs, start with the centre web running back to front (fig.2b).

Without cutting off a length of webbing, place the end of the webbing on the top of the frame on the back side. Fold over approximately 1.2cm (½″), tack down with five tacks in a staggered formation (three in a straight line along the edge of the fold, then two slightly in towards the inner edge of the frame), giving a shallow 'W' shape (fig.3).

Stretch the webbing across to the front of the frame, pressing the edge of the strainer on the side of the frame to give leverage (fig.3). Tack the webbing, again using three tacks in a straight line (fig.4). Cut off the webbing with 2.5cm (1″) to spare, turn it back over the first tacks and tack again with two tacks so that the five tacks are on the same shallow 'W' formation as before (the first three tacks will be hidden by the fold).

Place the other pieces of webbing from the back to the front of the frame in the same way, then secure the side webbing (which runs across the seat), interlacing it with the other webbing (figs. 2a and 2b, overleaf).

To cover the webbing before attaching the padding, fold over 1.2cm (½″) on one side of the hessian and, with the fold uppermost, tack it to the back of the seat frame with 1.2cm (½″) tacks. Strain it tightly to the front and temporarily secure with three tacks. Repeat this at the sides, keeping the grain of the fabric straight. Then, working from the centre of each side towards the corners, place tacks about 4cm (1½″) apart. Turn up the raw edges and tack these down (fig.5).

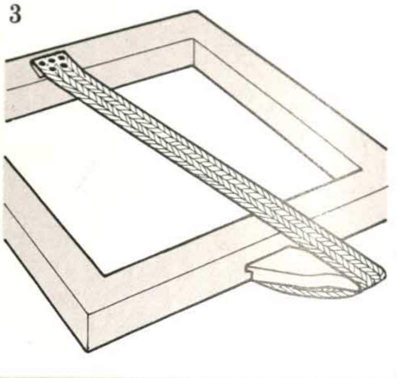
Attaching the padding

Cut four pieces of tape equal in length to the sides of the foam, plus 2.5cm (1″). Fold the tape in half lengthwise and crease firmly. Glue one side of the folded tape to the perimeter of the foam, positioning the crease as shown (fig.6). When this is completely dry, place the foam on the hessian, tape side uppermost and, holding it firmly in position, tack free edge of tape to frame.

As the foam is slightly larger than the seat, it will make a dome in the centre, giving a rounded shape to the finished seat. An additional piece of foam can be placed under the centre area provided the edges are tapered; this will give an even higher dome.

For a better foundation on which to place the final cover, the foam should be covered with a piece of calico or

3



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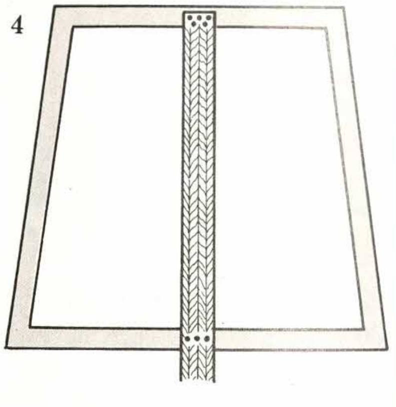

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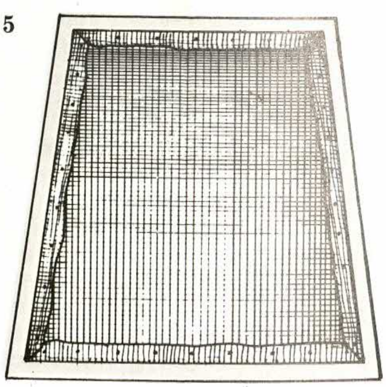

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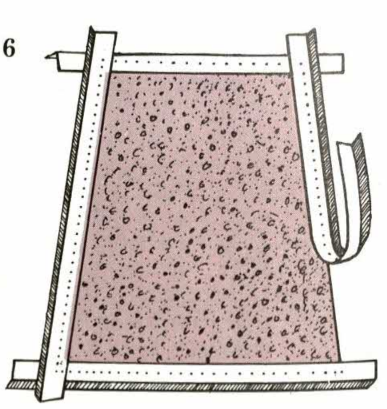
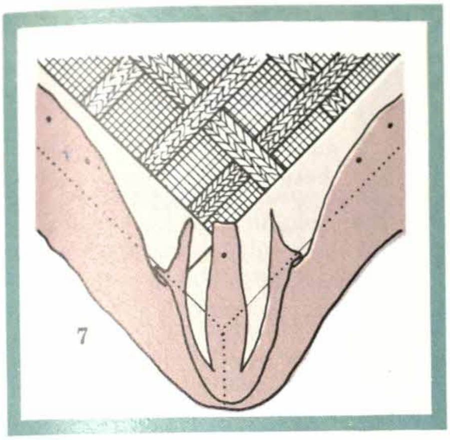


Maggie McNally



3. *Five tacks in a 'W' formation. The strainer is pressed on the seat frame for leverage.* **4.** *Webbing is secured with tacks in a row.* **5.** *The webbing is covered with hessian which is tacked to the seat frame.* **6.** *One side of the tape is glued to the perimeter of the foam.* **7.** *Fold up the excess fabric into a double pleat at the corners before covering bottom of seat.*

linen. Attach this with 1cm (⅜") fine tacks to the outside edges of the seat frame and cut off the raw edges close to the tacks.

Attaching the final cover

Make centre marks on the base of the frame at front and back and centre marks on front and back edges of covering. Then place the cover fabric on the work surface with its wrong side facing uppermost. Put the seat, foam side down, centrally on the fabric and turn up the edges of the fabric on to the bottom of the seat frame. Line up the centre marks on covering and frame, then temporary tack the covering into place, only driving the tacks half-way down. When satisfied that the covering is well placed, hammer down 1cm (⅜") tacks at 2.5cm-4cm (1"-1½") intervals.

At the corners make a double pleat as shown in fig.7. Start by pulling down the point tightly and tacking it. Fold the excess fabric into inverted pleats and tack these down. Cut off any excess fabric and then cover the bottom of the seat with the remaining piece of linen or calico.

Fold under the raw edges and tack the calico to the frame, covering the tacks and raw edges of the seat fabric, spacing the tacks evenly. Replace the finished seat in the chair frame and tap it down lightly for a good fit.

Steve Bicknell

Transworld

Liz Whiting

Here are some of the chairs and sofas which are re-upholstered in later chapters. All the basic principles of webbing, stuffing and springing are taught, and both traditional and modern materials and tools used.

Complementary colour schemes

Design know-how 15

Have you ever used red and green together and been surprised how dramatic the combination is—or blue and orange or yellow and violet? In common parlance these kinds of colours are known as 'contrasting' colours. More properly they are termed complementary.

Each colour in the spectrum has its own complementary colour, the one opposite it in the colour wheel. The 3 primary colours of red, blue and yellow, for example, have their complementaries in green, orange and violet respectively. If you look at the colour wheel (fig.1) you will be able to pick out the complement for every colour—yellow-orange teams with blue-violet, red-orange with blue-green and so on.

A sure-fire way of discovering the complement of a colour is by observing its after-image. Look at any colour, preferably a bright colour for the clearest result, for twenty to thirty seconds; then switch your gaze to a grey or white surface and watch a completely different hue appear. A red will give a green after-image, a blue an orange after-image and so on.

Each pair of opposite colours has its qualities and special uses which, together with black, white and grey, form the basis for intricate colour combinations. By a little experimentation you will be able to discover some of these effects for yourself.

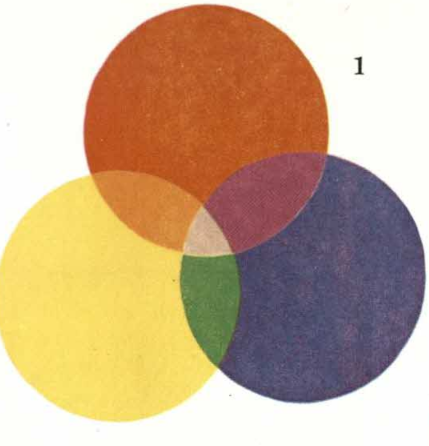
Each complementary couple has its own characteristic range of possibilities. If you take three copies of the same design and use a different pair of colour combinations for each you will produce three individual results. Experiment with strips of material or paints. Observe the results. Note the warmness or coolness of the colours, whether the combination is bold or subdued, the effect which the introduction of black, beige or white produces, and so on. You may also find that equal areas of two colours look uneasy; in this case change the proportions of colour—two thirds to one third, for example.

In nature blue and orange is probably the most common pair of complementary colours—orange centres in blue flowers. Red and green can be very intense and concentrated; note the contrast between a red rose and its green leaves. Yellow and violet can be bold, like a yellow-centred violet polyanthus, or sometimes more elusive—a yellow light in a darkening room.

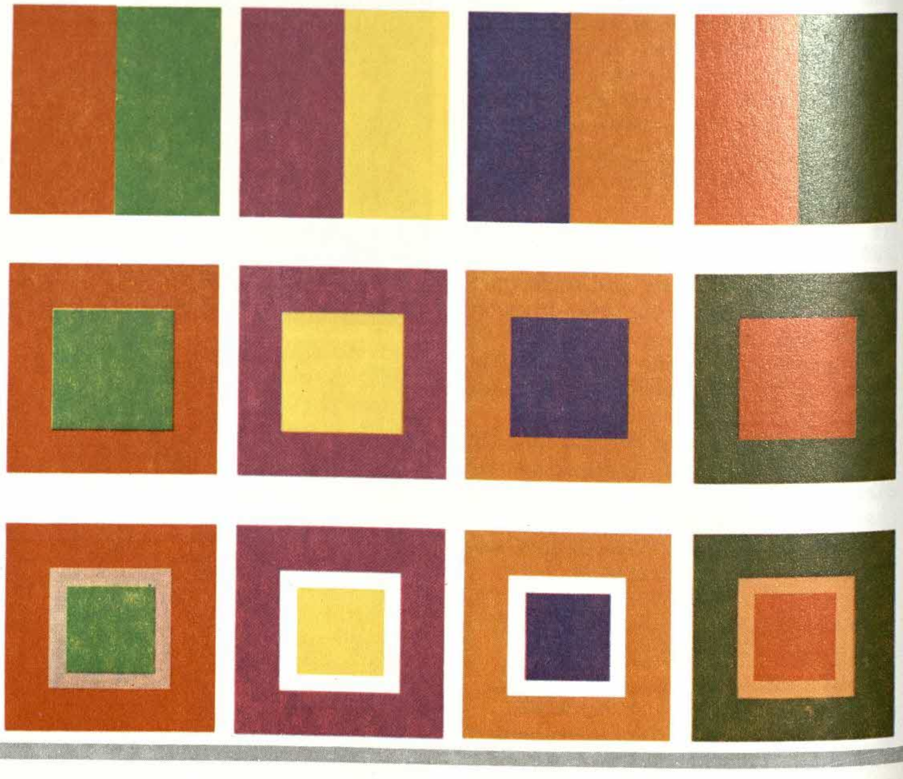
When complementary colours are placed together side by side each colour heightens the dramatic intensity of the other, even when both colours are basically subdued and muted. Bear this in mind when planning the colour scheme of your craft work. However, a stripe of a neutral colour such as grey or beige will successfully separate two complementary colours in danger of becoming over-intense.

Complementary colours which are interwoven are reduced, not heightened, in intensity. It's as though they have been mixed on a painter's palette; when an artist mixes any two complementary colours he will get grey—not a flat grey but a grey with a variety of shifting, delicate hues. In the same way two colour pairs mingled in craft work—as, perhaps, in weaving—will not appear at full intensity but will seem greyish, each colour reducing the intensity of the other. The after-images of each colour are themselves complementary, and will intensify some areas, soften others, lend colour to grey parts and soften brighter places.

Trevor Lawrence



1. *The primary colours and their opposite complementary colours in the chart.*



These complementary colours are so intense they almost jump out of the page. Look at the red and green squares. How do they differ? What effect does a grey border have? Then look at all the other colours in the same way.

Creative ideas 15

Washer and nut necklaces

All these designs were made by Jackie Short from simple nuts and washers obtainable from any hardware shop; cords for threading can be found in most haberdashery departments.

Calculating amounts. Decide on the length of your necklace or choker. Ask the shopkeeper to lay a selection of nuts and washers side by side on a ruler. From this measurement you can calculate how many you need to the cm (inch).

Types of cord. Remember that the cord must pass through the smallest diameter centre hole of the nuts and washers in your design.

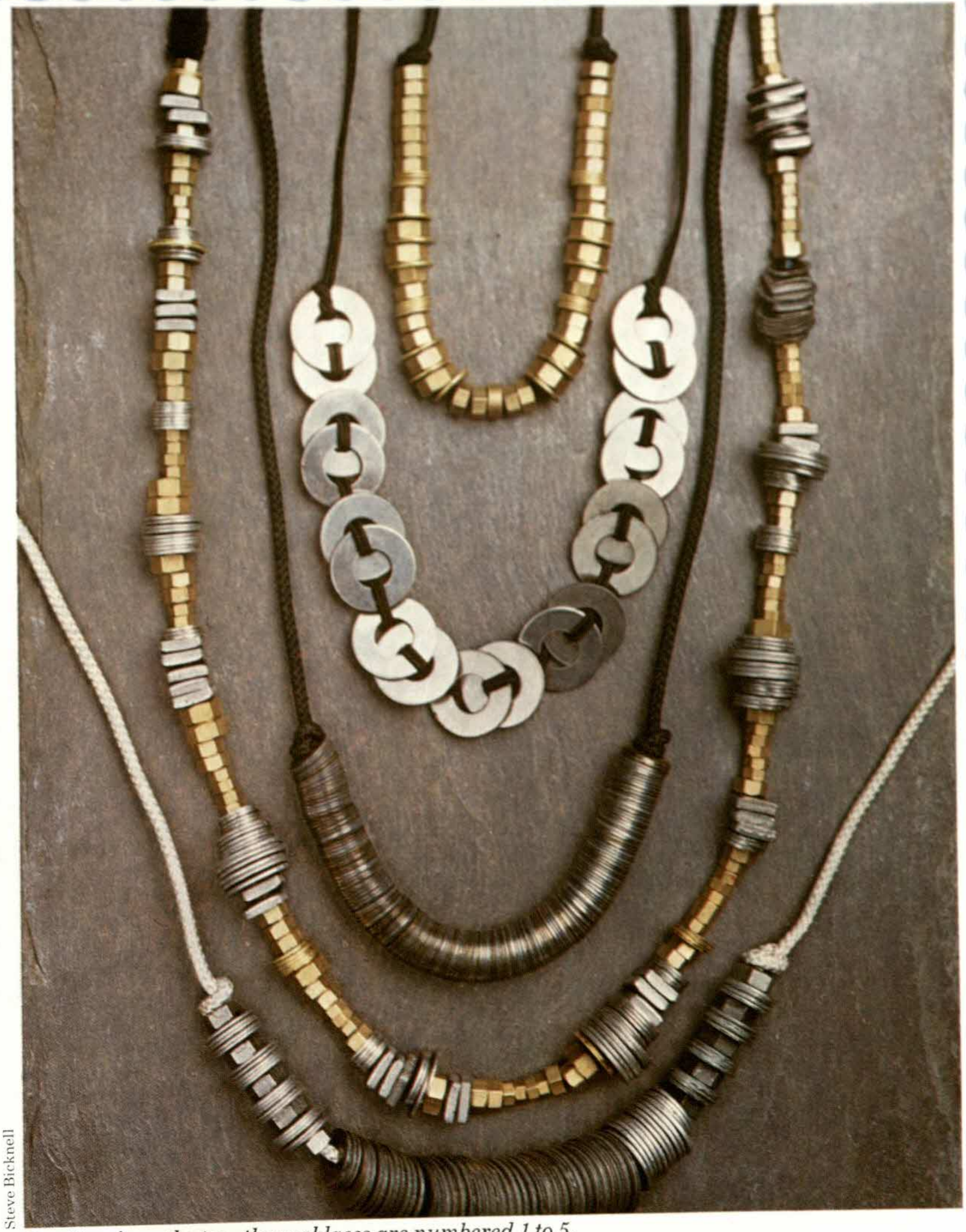
Choose from one of the following: leather thongs, shoe-laces, nylon cord, string, decorative cording, ribbon—anything strong and pliable.

Choker 1 is made of brass nuts and washers. Brass nuts: 8 large and 30 medium. Brass washers: 12 large and 20 medium. These are strung on fine roller blind cord.

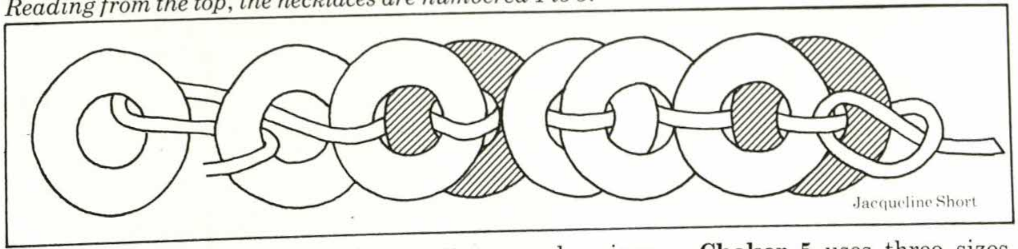
When you have finished stringing, tie a single knot at each end of the row of nuts to prevent movement. Finish cord ends by knotting or dipping into clear nail polish to prevent them unravelling.

Choker 2 uses 18 x 8mm ($\frac{5}{16}$″) steel washers; 90cm (1yd) of twin-corded flat cord, usually used for decorative braiding on clothes. The length of the linked washers is about 20cm (8″), finished with a single knot around the end washers. The linking pattern repeats every 4 washers as shown.

Choker 3 is made entirely of collared washers strung on nylon cord. There are 160 washers strung on a cord 82cm ($32\frac{1}{4}$″) long and finished as choker 1.


Steve Bicknell

Reading from the top, the necklaces are numbered 1 to 5.


Jacqueline Short

Linking pattern, choker 2.

Necklace 4 uses nuts and washers in both steel and brass. Brass hexagonal nuts: 12 large, 30 medium, 60 small. Brass washers: 12 large. Steel washers: 50 small 3mm ($\frac{1}{8}$″), 50 medium 5mm ($\frac{3}{16}$″), 20 large 7mm ($\frac{1}{4}$″). Square steel nuts: 30 x5mm ($\frac{3}{16}$″).

Thread nuts and washers in any order, but alternate brass and steel. Make the cord from 4 lengths of knitting cotton, each piece measuring about 69cm (27″). Because this necklace is long it is also heavy so, to prevent chaffing, make the part that passes around the neck with about 30.5cm (12″) of velvet ribbon. Loop this around the knotted ends of the four threading cords and sew neatly.

Choker 5 uses three sizes of steel washers and one size of hexagonal steel nuts. The size is determined by the diameter of the centre hole. Steel washers: 26 of 8mm ($\frac{5}{16}$″), 20 of 6mm ($\frac{1}{4}$″), 20 of 5mm ($\frac{3}{16}$″). Hexagonal nuts: 10 of 5mm ($\frac{3}{16}$″).

Cord and finish in same way as for choker 1.

Making your own boxes

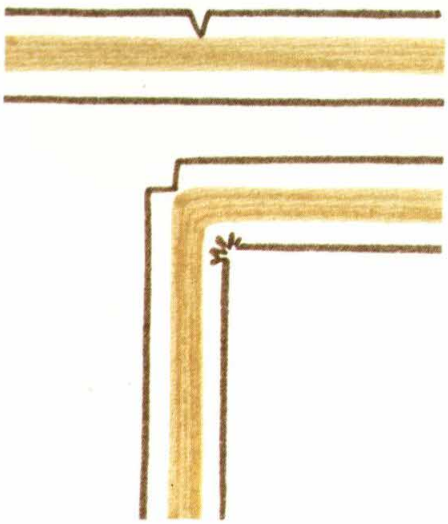
There are so many different uses for attractive cardboard boxes. Long-lasting boxes made of strong cardboard and fitted with compartments can be used to keep jewelry or to display a treasured collection of shells.

Less durable boxes can add glamour to a gift or add to the value of something made for a bazaar—cakes, sweets or biscuits. They can even be hand-printed to give a present a truly individual touch.

Boxes of exactly the same shape will look quite different when decorated. Try flock paper, wrapping paper, magazine cut-outs, old maps, foil paper or fabric to make them more attractive. You can varnish boxes to protect them and add gold or silver motifs and decorations.

Scoring

Most heavy paper and cardboard is made up of layers, rather like a sandwich. The aim of scoring is to cut through one of the outer 'bread' layers, leaving the rest intact (fig.1).



Victoria Drew

1. Cutting through the outer layer of card enables it to bend comfortably

Once the cardboard has been scored it can be bent accurately and this is the essential technique to learn when making boxes.

To score, mark the line to be cut in pencil, then draw along the line lightly with a razor-sharp cutting tool, such as a scalpel, against a metal ruler. Be sure to keep your fingers behind the cutting blade.

If too much pressure is put on the cutting tool and you have cut too deeply, the cardboard will simply divide in two. On the other hand if the cardboard is scored too lightly, it will not bend successfully.

A little experimentation will soon reveal how much pressure to use with different sorts of cardboard.

Suitable cardboards

Boxes can be constructed out of varying thicknesses of cardboard, depending on the type and size you are making. Small boxes with flaps should be made of cardboard about the thickness of a cereal packet. Thick cardboard, such as mounting board, is not recommended for boxes with flaps because the flaps tend to drop off quickly, being attached only by a thin scored layer of cardboard.

If using thick cardboard with a colour-coated surface for a box without flaps the scored lines will show white, so use the type which is coloured throughout unless the box is to be covered on completion.

You can begin making boxes out of any stiff paper or cardboard to hand, but there are many suitable cardboards on the market which will probably make a better job of it.

Different suppliers have different names for their products. There is Coverboard—a good quality cardboard suitable for small boxes. This is coloured throughout, and comes in a wide variety of shades and goes up to thicknesses of about 3mm ($\frac{1}{8}$").

Ticket Board comes in pale colours, in two thicknesses described as Eight Sheet and Ten Sheet, in two sizes, Royal, 610mm x 483mm (24"x19") and Imperial, 762mm x 558mm (30"x22").

Carton Board, is white, in sheets of about 570mm x 725mm (about 22"x29"). Ivory Board, slightly thinner than Carton Board, comes in sheets of 520mm x 635mm (about 20"x24"). Check what types of cardboards your local art shop has and choose from them.

Glues

When it comes to sticking boxes together, PVA Wood adhesive is recommended for working with cardboard, and rubber solution is the best thing for sticking down paper coverings. There are several animal-based glues on the market which are designed especially for paper work. A thick mixture of wallpaper paste can also be used for sticking heavy wallpaper coverings, but it will cause bubbles to form on thin paper and can make the cardboard bubble if it is too liquid.

Making the boxes

Basic equipment you will need:

Steel ruler.

White or coloured cardboard.

Animal glue or wood adhesive.

Rubber solution adhesive, such as Cow Gum or Gloy Studio Gum.

Scalpel or sharp cutting tool.

Various types of adhesive tape.

A pair of compasses.

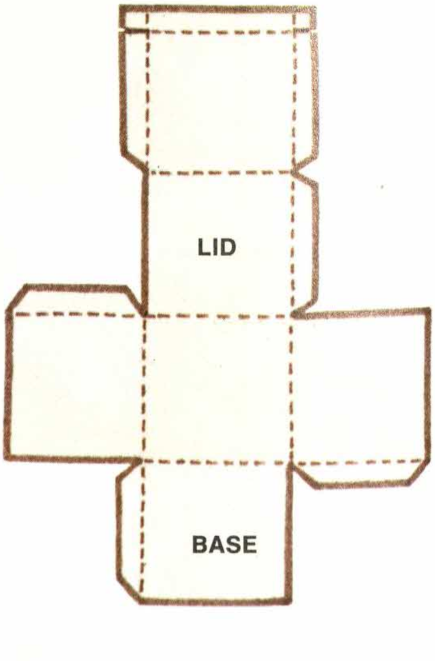
Assortment of fancy papers.

One piece boxes. In this type of box, the lid is virtually an extended flap.

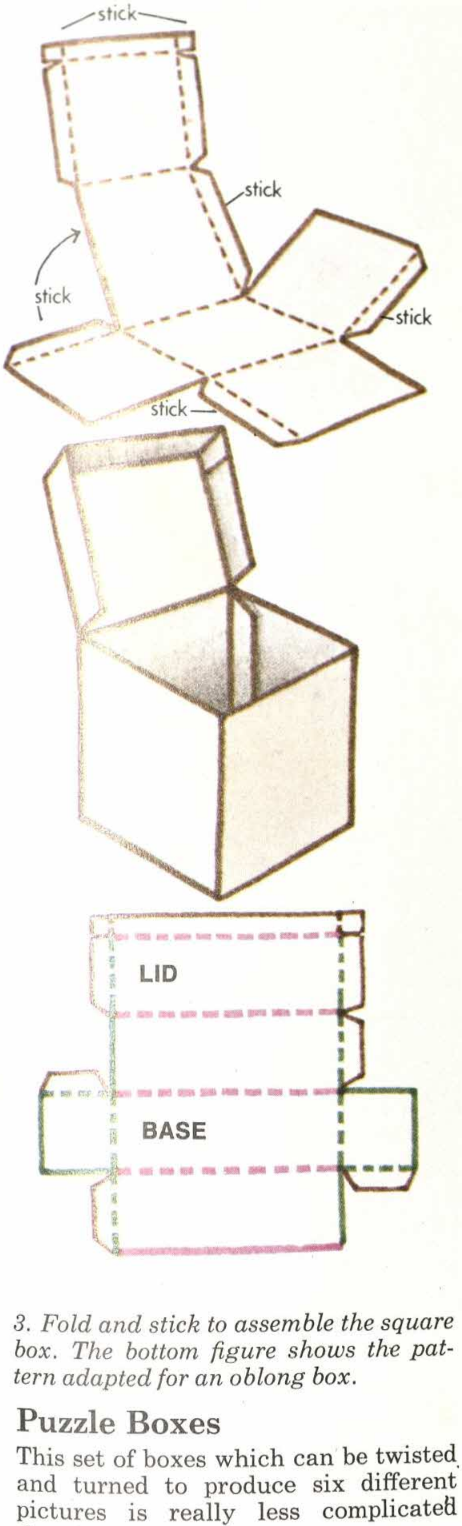
Draw the pattern in fig.2 with all squares equal in size. Draw round a square object to create a square or use the method described in Design know-how chapter 1, page 28, to make sure all angles are 90°.

Cut along solid lines; score along dotted lines. Fold and stick as in fig.3a and b.

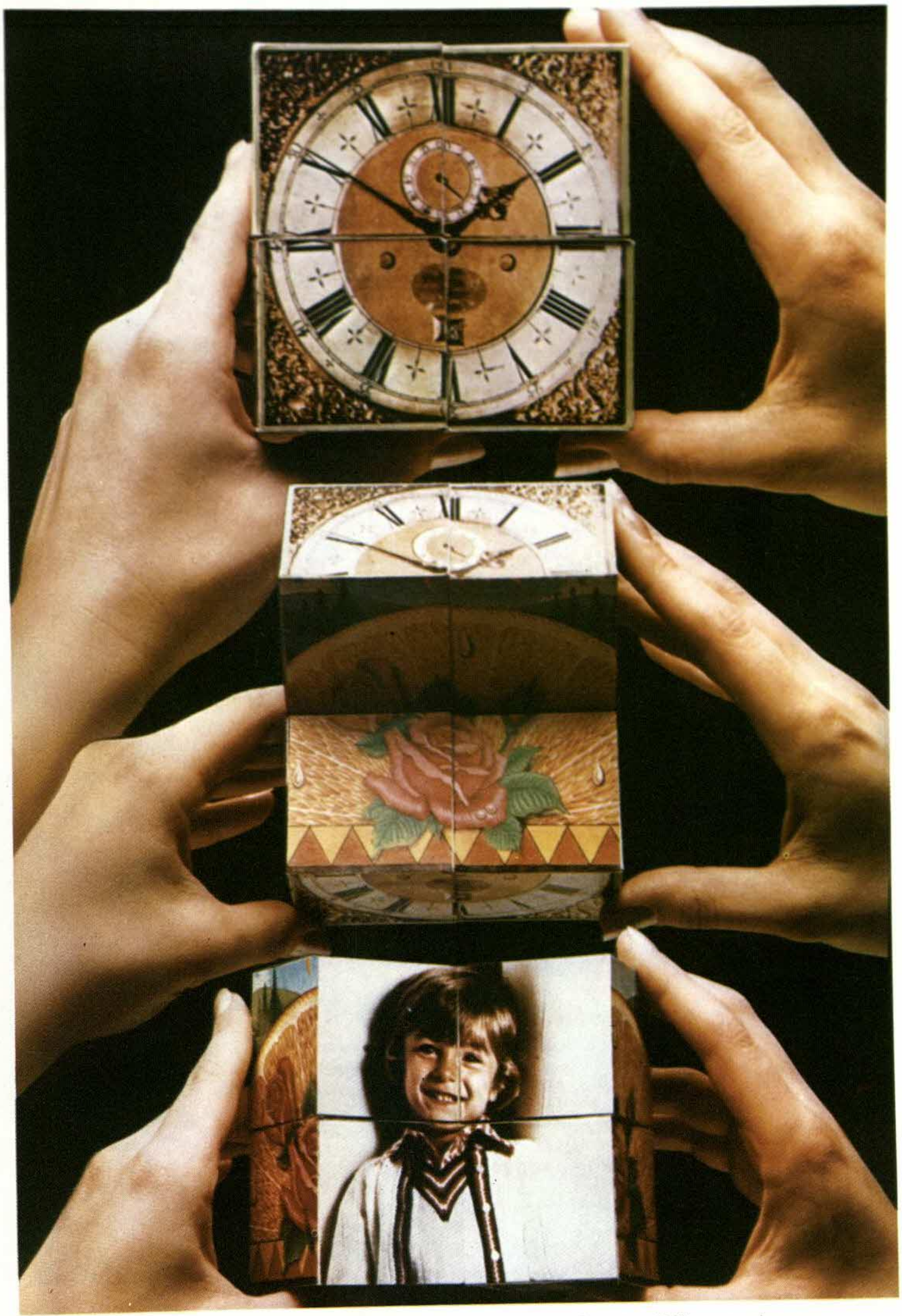
This pattern can be easily adapted to other proportions (fig.3c). The main point to remember is that the sides must all be the same depth and the lid must match the base.



2. Cutting and scoring diagram of a square, one-piece box with a lid



3. *Fold and stick to assemble the square box. The bottom figure shows the pattern adapted for an oblong box.*



4. *A set of four "puzzle" boxes can be twisted to make six different pictures*

Puzzle Boxes

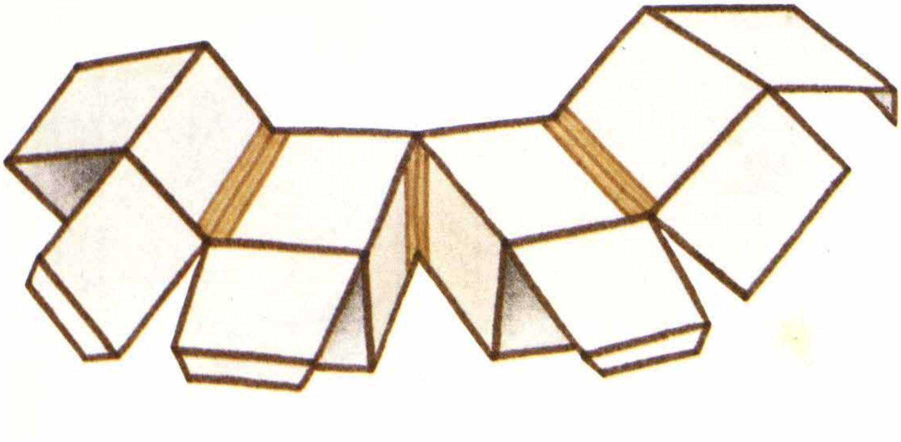
This set of boxes which can be twisted and turned to produce six different pictures is really less complicated than it looks.

It is constructed out of four, square, one-piece boxes.

Make four square boxes with attached lids (omitting side flaps on lids).

Be sure that the boxes are very accurately made. Hinge them together with transparent adhesive tape as shown in fig.5.

Find six suitable square pictures and cut them into sets of four equal squares. Stick each set of four squares to the relevant sides, one at a time, until the puzzle is completed.



5. *Hinging puzzle boxes so that they can be turned to show their six sides*

Liz Whiting

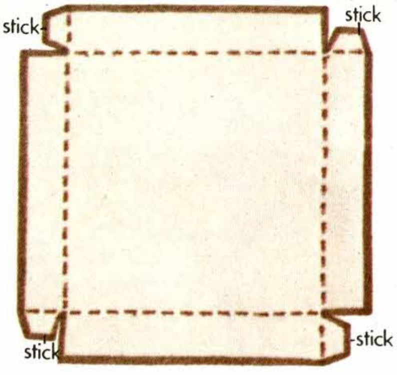
Coloured cardboards pasted with cheerful wrapping papers are used for these easy-to-make petal boxes.

Boxes with separate flapped lids

Make a separate lid by cutting the pattern as in fig.6. Cut along solid lines; score along dotted lines. Draw the centre square 1.6mm ($\frac{1}{16}''$) larger all round than base of box so that the lid will fit over it. Stick flaps inside lid.

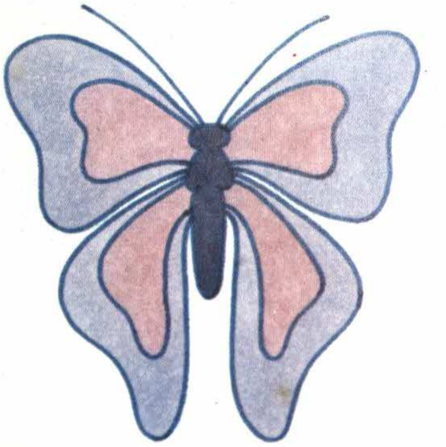
Covering boxes. If attractive cardboard is not available you can use something easily obtainable such as a cornflake packet and cover it in attractive wrapping paper.

When covering boxes with decorative papers, remember not to stick the covering to the flap areas, or it will make the joins too bulky.

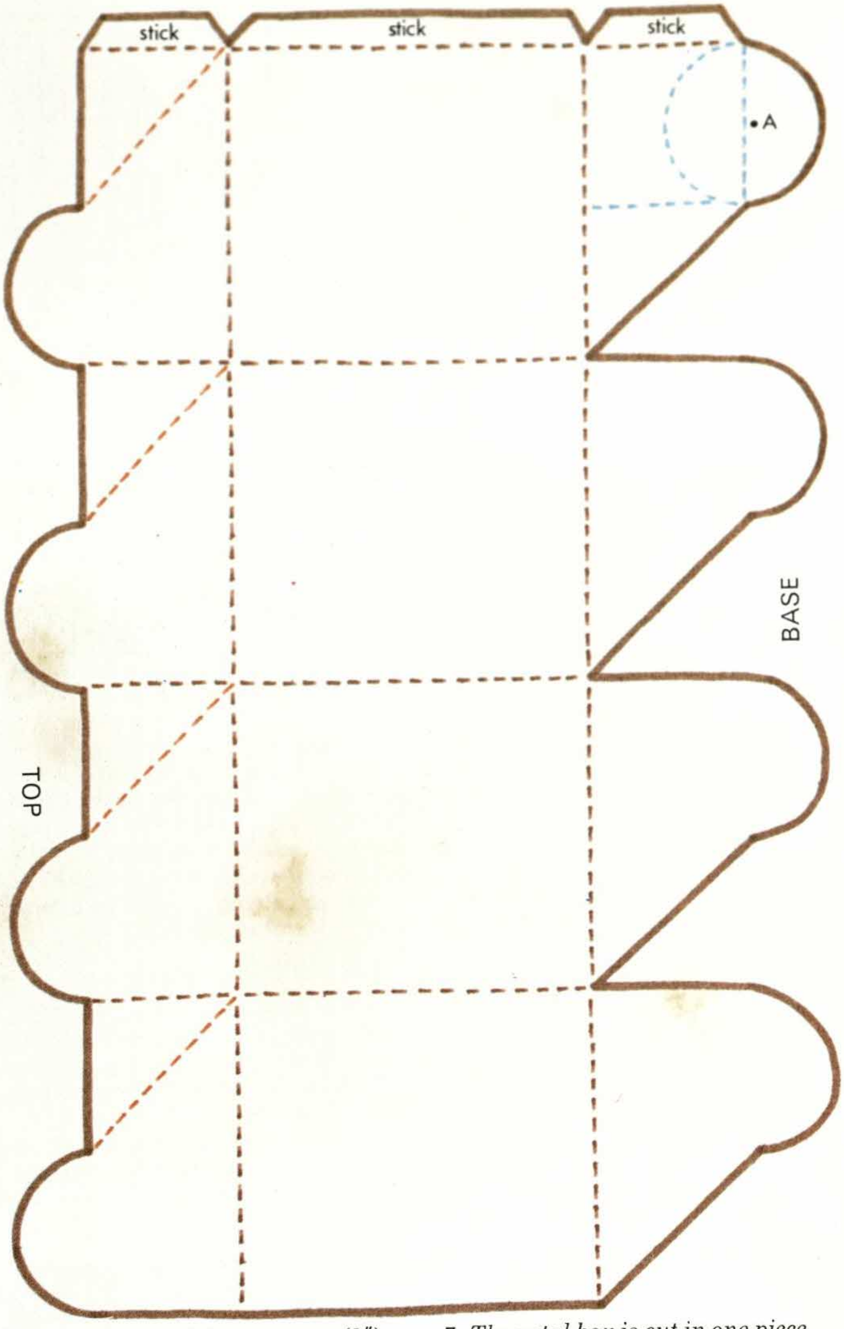


6. Separate lids are slightly larger all round than the base of the box

Stick the covering to the box while it is still flat and assemble the box while the covering paper is still damp, when it will have more give.



Decorate a box with a butterfly



7. The petal box is cut in one piece

Petal boxes

These charming little boxes with four-petal tops and bottoms need the minimum of sticking because most of the flaps tuck neatly into one another. They are easy to make once you have learnt the principles of box making on the preceding pages.

Use these boxes to hold sweets or small gifts at children's parties or bazaars. Neatly file away buttons or jewelry in them. Keep some on your desk to hold paper clips, elastic bands and drawing pins.

Make them out of coloured or white cardboard and decorate them with lighthearted gummed paper motifs, cut-outs from magazines, stars, spangles, sequins or anything else you can think of.

The pattern given is for a box measuring about 9cm (3½″) x 7.8cm (3″) x 7.8cm (3″) square. To make your own size box, keep these proportions but double or treble the measurements, or reduce them by half.

You will need:

Rough paper for pattern.
Thin cardboard measuring about 22cm x 32cm (8½″x12½″).
Pair of compasses.
Ruler.
Pencil.
Scalpel.
Cutting board.
Paper adhesive.

☐ Following fig.7, cut out a trial paper pattern of rough paper first, as this will save precious cardboard.

☐ Draw the figure to the measurements shown, lightly indicating scoring lines. To make accurate circular tabs, draw a square, the sides of which measure half the length of the top of one of the sides of the box (fig.7).

Point A is half-way along one of the sides of that square as shown.

Draw a circle from point A, with its radius half the length of the sides of that square.

☐ Score lightly along the orange dotted lines from underneath because they are valley or sunken folds, and score lightly along the brown dotted lines from above because they are mountain or peak folds.

☐ Fold to form the box, sticking at the sticking tabs.

☐ Fold down the top and bottom of the box. Stick the base.

Casting with plaster of Paris

Clay 10

Plaster of Paris is an interesting material to work with, particularly if you have already experimented with modelling techniques in clay.

It provides a good contrast because although the processes involved in making a plaster of Paris model are basically mechanical, in practice they require a degree of expertise and personal inspiration that makes plaster of Paris casting a worthwhile diversion from more conventional clay modelling techniques.

It is also worth becoming familiar with the material because it has applications connected with clay which are discussed in a later chapter.

Uses and characteristics

Plaster of Paris is mined as a chalk-like material, which is then dried and refined until it reaches the fine whitish powder in which it is sold.

When the powder is added to water it becomes a thick, creamy liquid which hardens rapidly to give a solid, fairly durable pottery-like substance. Most commonly it is seen forming a case on broken limbs, but it has a variety of other uses, many of them connected with casting.

Because the plaster has a liquid stage, it can be poured into a mould before it hardens, and when hard it takes on the shape of the mould. It can be used in this way for the production of anything from dental moulds to studio scenery. Two qualities are available: the fine white surgical plaster and a coarser variety that is used for larger scale modelling and is an attractive creamy colour.

Experiments in casting

The simplest way for a beginner to make a plaster cast is by using a rubber mould, made by pouring special modelling rubber over the object to be cast. The rubber hardens to form a receptacle, exactly the same shape as the object, into which the liquid plaster is poured and allowed to set.

This rubber can, also, be melted down and used again once you have finished with a particular mould.

Objects for casting

The simplest shape for a beginner to work with is a small and rather flat shape. A wall plaque, a large attractive coin or a medallion, for example, are all suitable.

You could also try models of small animals, provided they are shaped in one solid piece, paperweights or small, solid ornaments.

To cast a plaque

For a plaque about 15cm (6″) across.

You will need:

Materials for making two 'wells' to contain the rubber and plaster. Clay, plasticine, or a small cardboard box sealed with plasticine are all suitable.

Rubber moulding materials such as Vinamould, 0.7kg (1½lb).

Large, sturdy saucepan, asbestos mat, protective gloves.

Plaster of Paris (most easily obtainable in 3kg (7lb) bags).

Plastic bowl, 3.5lit (6pt) capacity.

Piece of twisted wire for hook.

Preparing the piece for casting. When you have selected a plaque for casting, check on the way it is finished. Non-porous materials such as iron, brass and plastic are suitable for casting without any further preparation; just clean them thoroughly with a soft duster.

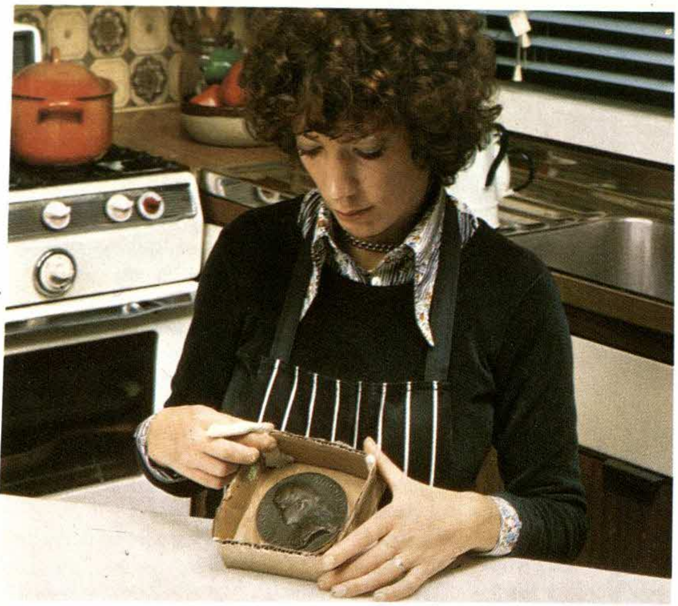
Porous materials such as wood or plaster must be sealed with a coat of clear varnish. Let the varnish dry out thoroughly before beginning casting.

☐ Build a 'well' or box. Construct a leak-proof container for the plaque from clay or plasticine. Place the plaque centrally inside it, face side up (fig.1).

Preparing the rubber mould. Use a strong pair of scissors to cut the rubber into manageable pieces. Place pieces in saucepan, resting on an asbestos mat over a medium heat.

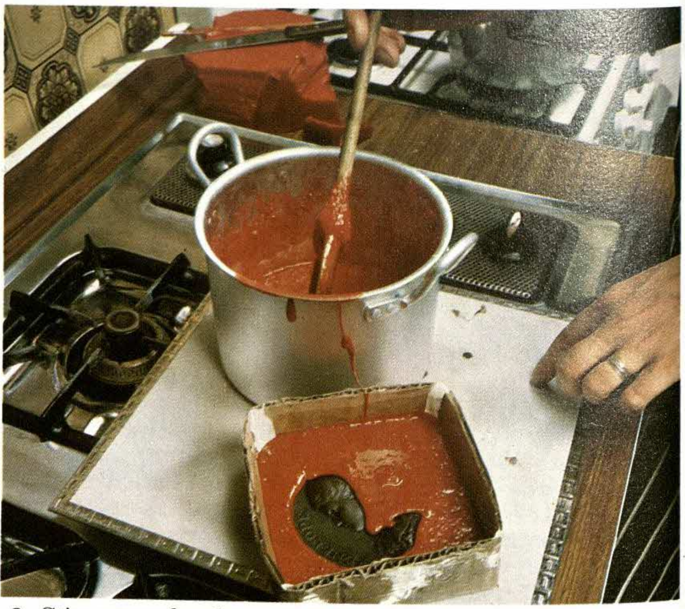
☐ Stir continually, and add more lumps of rubber as it melts, until it is all liquified. This will take about 45 minutes (fig.2).

Plaster of Paris was used to cast these cherub wall plaques. The irregular mould shape gives an attractive finish to the completed plaster cast.



Iain Reid

1. *Place the plaque in the centre of the sealed 'well'.*

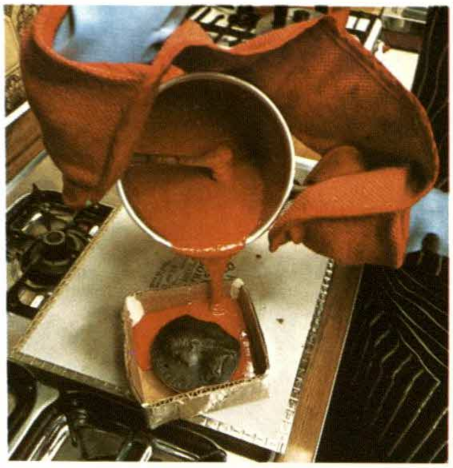


Camera Press

2. *Stir over a slow heat until the rubber is all melted.*

The process does create a strong smell, so choose a suitable time to do it. Take care to protect your hands with stout gloves, and cover any vulnerable areas nearby with an old sheet.

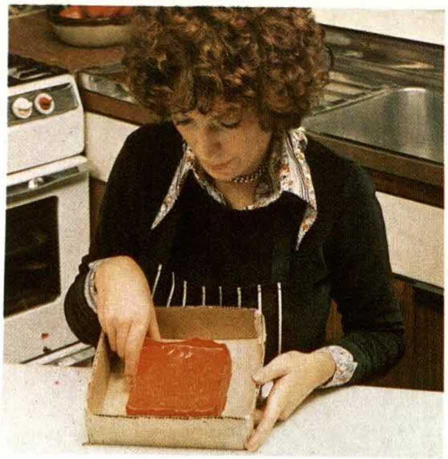
☐ Allow the rubber to cool very slightly, then pour it over the plaque. Pour the rubber in at the edges of the well, allowing it to rise gradually over the plaque so that it expels any air bubbles (fig.3).



3. *Pour the liquid rubber into the well.*

Cover the plaque completely, and leave the rubber to harden overnight.

Plaster of Paris outer mould. This will be your support case. Remove the original well and build another about 5cm (2") larger all round. Replace the rubber shape in the new well, with the rubber on top and the plaque still underneath (fig.4).



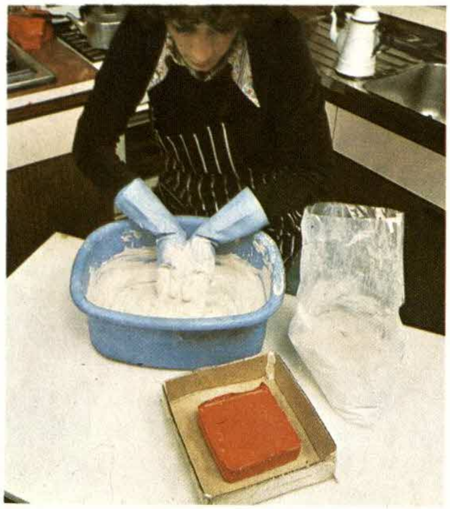
4. *Replace the shape in a larger well.*

Iain Reid

☐ Take the plastic bowl and pour in 1lit (2pt) of cold clean water. Sprinkle the plaster on to the water, working fairly quickly, until the water is not absorbing any more plaster and a small island builds up in the middle. This takes far more plaster than you would expect, and it is difficult to prescribe an exact quantity. Several large double handfuls should be about sufficient.

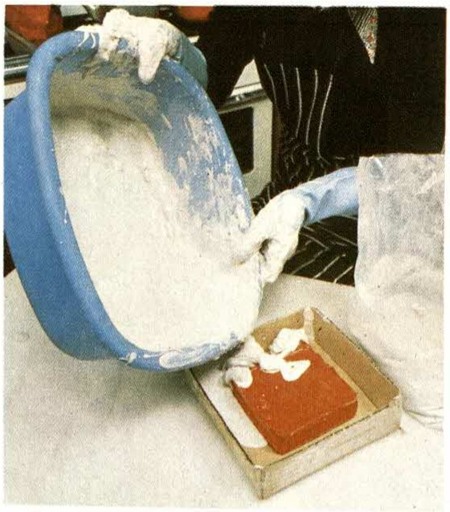
During the process of adding the plaster to the water, the powder tends to fly about because it is so fine, so work somewhere where dust is not important, or cover surroundings with sheeting. It is worth covering up your hair, too.

☐ Once you have added sufficient plaster, leave the mixture to stand for about 30 seconds. Then plunge in your hands and work the plaster between your fingers until it is free of lumps and bubbles, and of the consistency of thick cream (fig.5).



5. *Thoroughly mix the plaster by working it in the fingers to remove any lumps.*

☐ Pour it over the rubber mould, covering it completely, and leave the whole thing to harden overnight (fig.6).



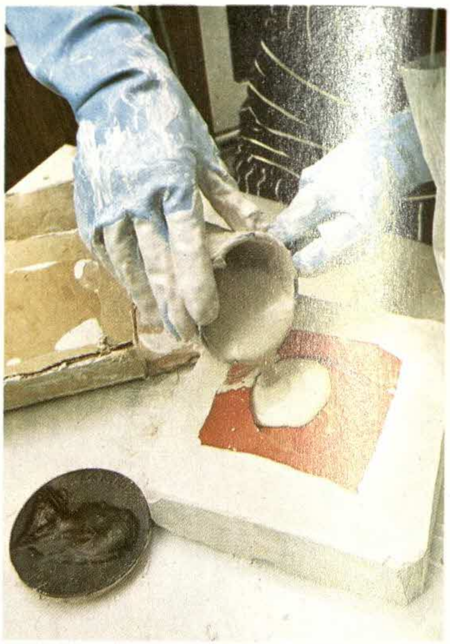
6. *Pour it over the rubber mould and then leave it until it is completely hard.*

Making the cast. Break away the wall and turn the plaster and rubber case upside down.

☐ Carefully remove the plaque, which leaves a rubber mould inside a plaster case. The plaster supports the rubber of the actual mould when the weight of the cast plaster is inside it.

☐ Mark the plaster case at the top centre—if the plaque is to be hung, it is important to know where the wire hook is to be placed.

☐ Mix some more plaster, taking particular care to get rid of lumps and air bubbles. Pour the liquid plaster into the mould, quite slowly, taking care not to overfill it (fig.7).

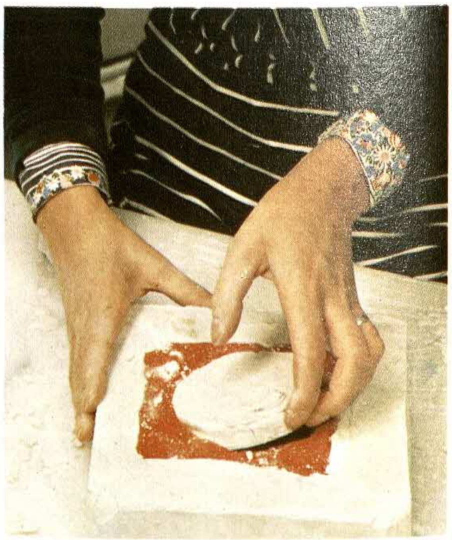


7. *Slowly pour the plaster into the mould shape, taking care not to overfill.*

☐ 'Comb' through the plaster with the fingers, probing into the crevices of the mould to force out air bubbles. Give the mould a shake, then finally bang it against the work surface to remove any lingering pockets of air.

☐ Before the plaster hardens, insert the wire hook.

Wash the plaster off your hands and arms before it sets and becomes more difficult to remove.



8. *Ease the plaster cast out of the mould, taking care not to chip the edges.*

As the plaster dries out, it begins to feel warm. This is part of the chemical reaction taking place as the plaster reconstitutes itself into the original solid form.

☐ When the plaster feels hard and dry, gently ease it out of the mould (fig.8). This requires care as you may break the cast—it may be necessary to trim the mould at the edges.

☐ Leave the model in a warm, dry place to dry out overnight (an airing cupboard is ideal). Finish it off by trimming away any rough pieces with a small, sharp knife. If a really smooth finish is required rub it down with very fine emery paper.

One of the attractions of this method of modelling is that you can use the same mould to make as many casts as you like.

Decorating the completed cast. The naked plaster, white or creamy depending on the type you have bought, looks very attractive as it is.

It can, however, be decorated in a variety of ways. A coat of clear varnish gives a plain, shiny effect like marble, or the piece can be decorated with water or poster colours, which looks particularly attractive on landscape casts. Finish off casts decorated in this way with a coat of clear varnish. Enamel paints give a particularly bright, shiny effect, and for a really special piece try gilding a small area to highlight hair, a corner of a landscape or a similar detail.

Alternatively, try painting the background in blue, green, or black and leave the relief white to give a 'Wedgwood' effect. Experimentation, too, is always worthwhile. Polish, for example, rubbed into plaster gives an interesting 'antique' effect.

Casting other pieces

Once you have become confident in the technique of making the rubber mould —the trickiest part of the operation— tackle some larger objects.

Any piece more than a few inches high requires a two- or three-piece mould, which is complicated to make, but small items such as chess pieces can be cast, with care, in a single-piece mould.

Try also some pieces of your own manufacture: flat arrangements of twigs, grasses or pebbles.

Decorating the casts

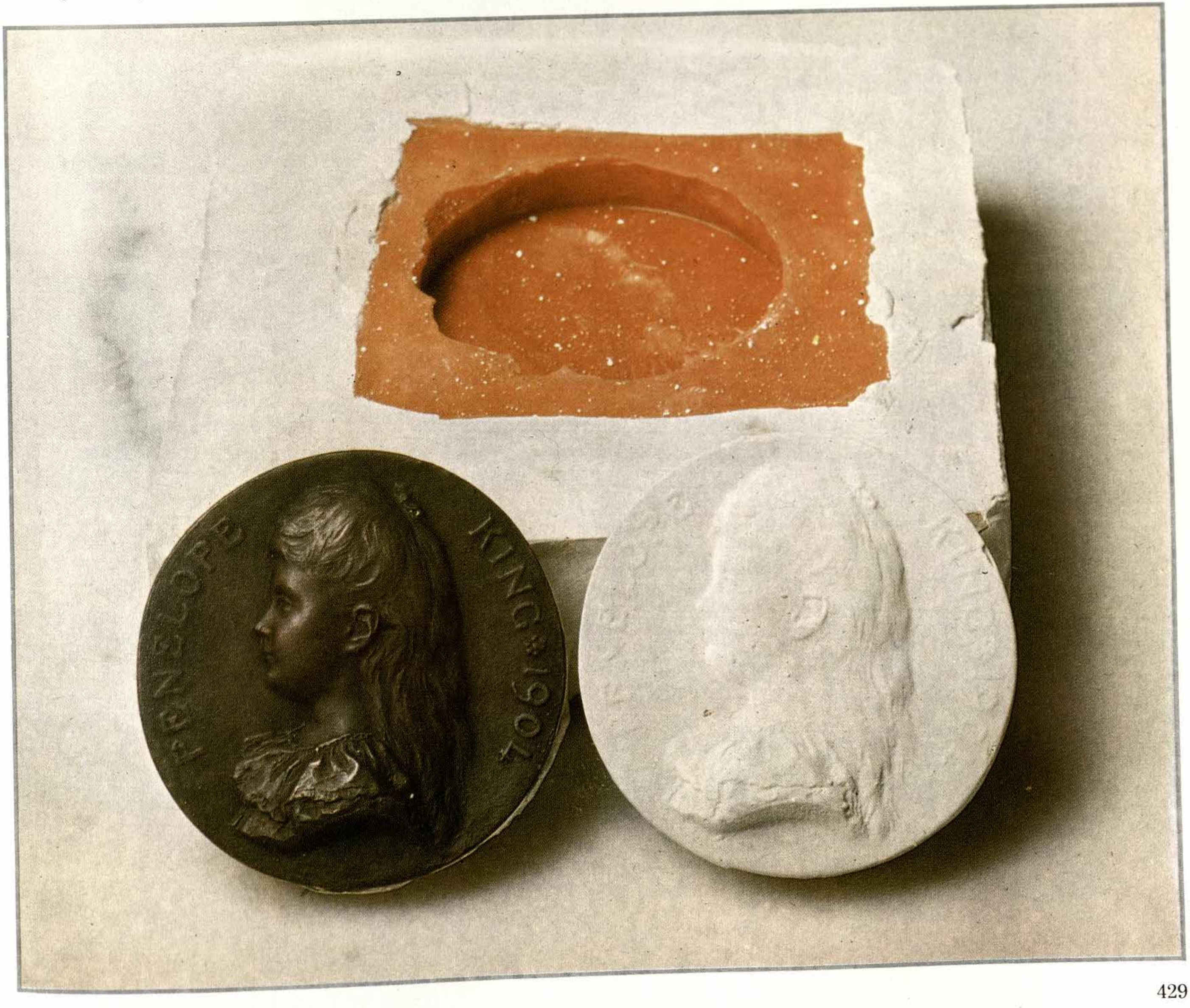
The decorative possibilities for articles like this are particularly exciting. The same rubber mould can be used to make an almost unlimited number of identical casts, so there is scope for a great deal of experimentation to make the same piece look totally different.

Plaster of Paris is very cheap, so be adventurous in discovering what effects you can achieve.

Continuing with plaster

The range of application is wide and the next chapter deals with an unusual way to cast a replica of an incised surface.

The completed plaster cast is an exact replica of the original metal plaque.



Iain Reid

Cushions and bolsters

Cloth — sewing 7

Sewing chapter 6, page 400, covered the techniques of making plain and piped flat cushions and of inserting zip fasteners into cushion covers. This chapter tells you how to make cushions with welts, and bolsters.

Cushions with welts

This type of cushion has a strip of fabric separating the top section from the bottom; it can be piped or left with plain edges, and can have a soft filling or be made from a foam rubber pad for a firm seating cushion. It can be made to almost any shape that you choose.

The fabric. The range of suitable fabrics for a soft cushion is as wide as that for flat cushions.

If you are making a firm seating cushion which will have a lot of wear, use a medium weight furnishing fabric recommended for loose covers.

How much fabric? The easiest way of estimating this is to draw a cutting chart to scale on graph paper; eg take one small square on the graph paper to represent 3cm (1"). By measuring the length of the completed layout you will be able to see how much fabric you will need for a plain cushion.

If the cushion is to be piped, allow extra fabric for this. About 45cm (½yd) should be sufficient to pipe the top and bottom, but this depends on the size of the cushion.

To make a cutting layout. Draw a straight line to represent the width of the fabric. Draw a line at right angles to each end of the first line. Then draw on the shapes of the cover pieces: a top and bottom, and either separate welt strips for each side of the cushion or one long strip to go right round the cushion (plus a little extra if possible) if the cushion does not have corners, eg a round or oval cushion. Add on 1.5cm (½") seam allowance all round each piece (fig.1).

Note. Pieces should be cut on the straight of grain. If the fabric has a pile or one-way design this should run from back to front on the top and bottom pieces and from top to bottom on the welt.

Piping. A cushion with a welt looks better if it is piped. Make up piping and attach it to the top and bottom sections, (see Sewing, chapter 6, page 400) before joining them to the welt.

Zip fastener. If a zip fastener is to be inserted into a square or oblong cover, insert this between the welt and one side of the bottom piece of the cover before attaching the top piece.

Alternatively the zip can be inserted into the centre of one welt section or centrally on the bottom section. In either case the relevant section should be cut in two equal pieces of half the finished size plus a 1.5cm (½") seam allowance all round each piece.

Making a welted cushion is an excellent way to display a piece of work, like this delightful needlepoint embroidery.

Steve Bicknell

Cushion pads

Soft cushions. Square, round and oblong cushion pads with welts can be bought ready made but if you prefer, or if you want a more unusual shape, it is quite easy to make your own pad.

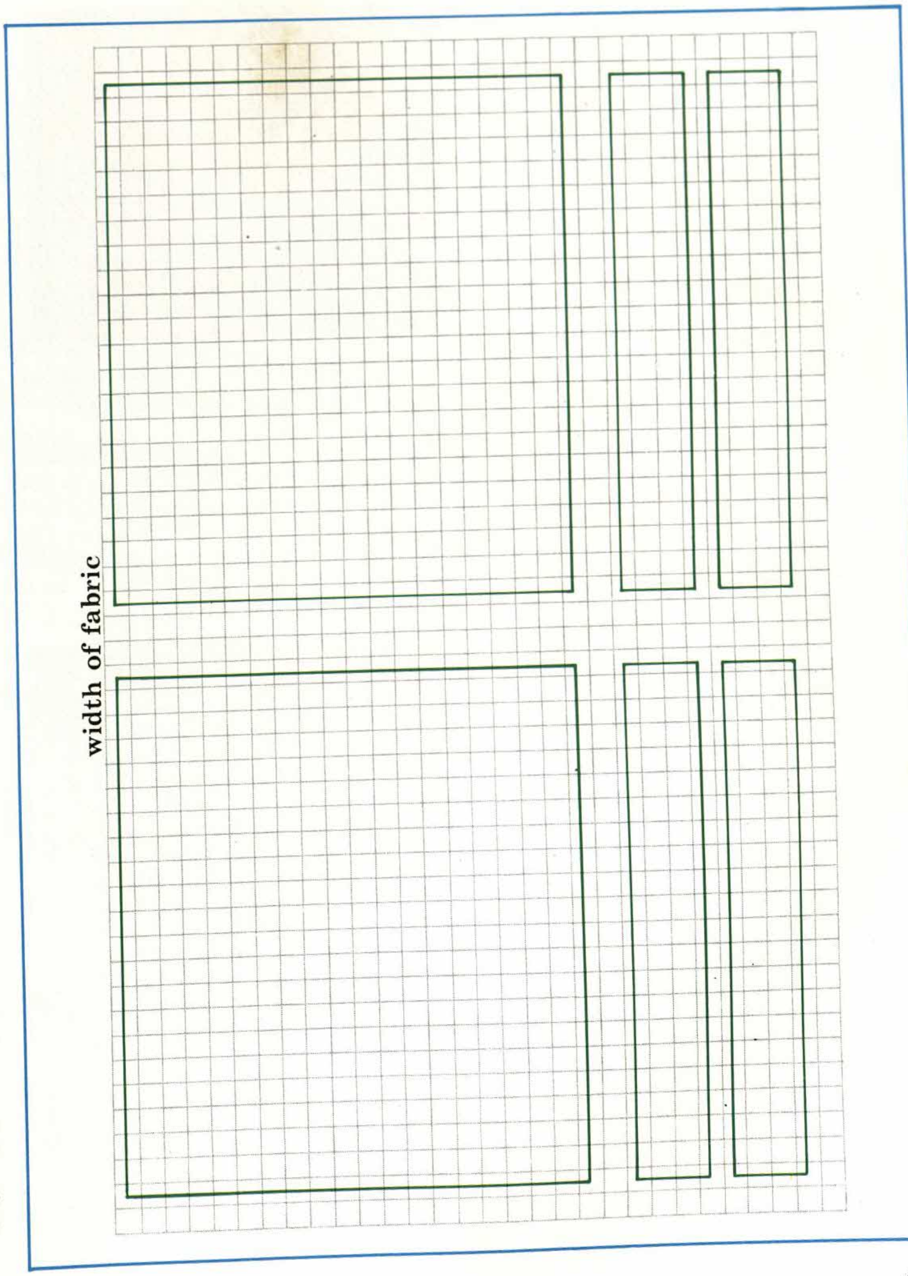
Make the pad cover in the same way as the outer cover, making it 1.5cm (½") larger all round than the outer cover. Do not pipe the edges. (See Sewing, chapter 6, page 400, for suitable fabrics and soft fillings).

Firm cushions. Foam rubber pads are sold without covers and can be cut to a different shape, if required, with a large pair of sharp scissors or a sharp knife, depending upon the thickness of the foam. Stick a paper template of the exact shape required to the top of the piece of foam with small pieces of sticky tape, draw round this with a ball-point pen and then cut out the shape.

It is advisable to make an inner covering for a foam rubber pad to protect the foam and prevent the outer cover from sticking to it.

The pad for a firm welted cushion should be the same size as the outer cover so that the edges of the outer cover sit neatly on those of the pad. A good tip is to cut the outer cover the same size as the pad cover but to make very slightly larger turnings—about 3mm (⅛") larger on the outer cover—to ensure a snug fit.

1. *An example of a cutting layout with the top, bottom and four separate welt sections drawn in position.*



Trevor Lawrence

Round cushions

You will need:

A cushion pad.
Fabric for cover as above.
Piping cord (optional).

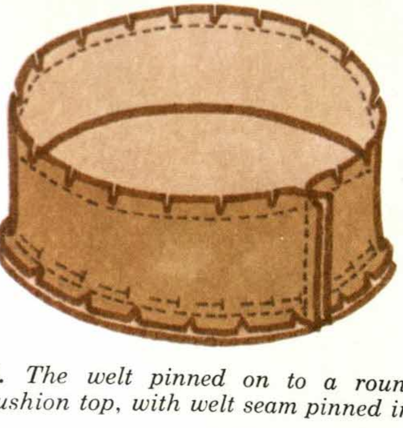
To make the cushion. Make a circular paper pattern for the top and bottom of the cushion to the finished size, using the pin and string method (see Design know-how chapter 1, page 28).

☐ Pin the pattern to the fabric, following the cutting chart, and cut out a top and bottom piece in fabric, not forgetting to add 1.5cm (½") seam allowance all round. Cut a strip for the welt to the required depth, by the length of the circumference of the circular pattern (see Design know-how chapter 1, page 28), plus 1.5cm (½") seam allowance all round. (If you have enough fabric it is advisable to allow a little extra on this length which can be trimmed away later if necessary.)

☐ Fold the top and bottom pieces in half and mark the centre back of each piece with thread.

☐ On the welt piece work a line of stitching along each long edge on the seam line. Snip into these edges at 2.5cm (1") intervals, almost to the stitching. This ensures a neat fit when the welt is attached to the top and bottom pieces.

☐ With right sides together, pin one long edge of the welt to the top piece, 1.5cm (½") from the edge. Start pinning at the centre back, matching the centre back mark with a point 1.5cm (½") from one short end. Continue pinning until the welt is pinned right round the top and then pin in the welt seam (fig.2).



Victoria Drew

2. *The welt pinned on to a round cushion top, with welt seam pinned in.*

☐ Stitch the welt seam and trim the seam allowance on the second short end to 1.5cm (½") if necessary.

☐ Tack and stitch the welt to the top, taking 1.5cm (½") turnings.

☐ Snip 'V'-shaped notches almost to the stitching at 2.5cm (1") intervals in the circular piece and press the turnings on to the welt.

☐ Pin the bottom piece to the welt, making sure that the grain runs the same way as on the top section. Tack and stitch, taking 1.5cm (½") seams, leaving about one third of the edge unstitched to turn through. Notch and press turnings as before.

☐ Turn cover to the right side, insert pad and slip stitch opening.

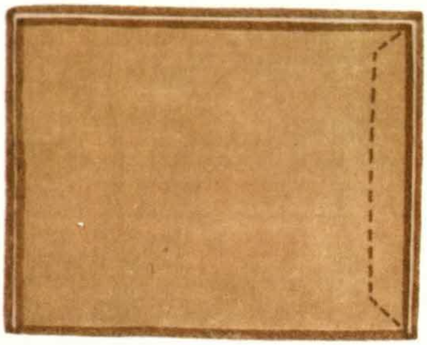
Square cushions

You will need:

A cushion pad.
Fabric for cover as above.
Piping cord (optional).
Zip fastener (optional).

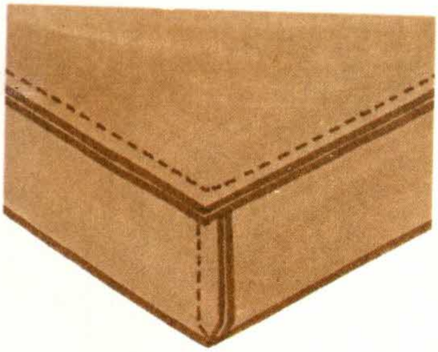
To make the cushion. Cut out the pieces for top, bottom and welt of cushion on the straight of grain to the sizes given in the cutting chart (the finished size plus seam allowance).

☐ Take two side strips and join them along one short edge taking 1.5cm (½") turnings. Taper stitching into the corners 1.5cm (½") from the beginning and end of each seam (fig.3). Join the other strips to these two in the same way to make a continuous strip for the welt. Press turnings to one side.



3. *Two welt strips stitched together before attaching welt to a square top.*

☐ With right sides together, pin the top section of the cover on to the welt, matching corners of the top to welt seams. Tack and stitch (fig.4).



4. *The top section of a square cushion cover stitched to the welt.*

☐ Attach the bottom piece to the welt in the same way, but leave one side open to turn through. Make sure that the grain runs in the same direction on the top and bottom.

☐ Turn cover to the right side, insert pad and slip stitch opening.

Bolsters

The basic bolster shape is cylindrical, and can be piped or decorated with braid, or other trimming.

The fabric. Choose a closely woven, medium or heavyweight fabric, such as velvet, corduroy, firm tweed, linen or heavy cotton. A loosely woven fabric like soft tweed is unsuitable as it will pull at the seams.

How much fabric? Decide on the length and the diameter of the ends. You will need enough fabric to cut a piece to the length of the finished bolster, plus 3cm (1") for turnings, by the length of the finished circumference of the ends (see Design know-how chapter 1, page 28), plus at least 3cm (1") for seaming, and two circles with a diameter 3cm (1") larger than that of

A poppy motif applied by machine adds interest to a simple striped bolster.

Steve Bicknell

the finished ends. Draw the pieces to scale on a cutting layout to calculate the amount of fabric required.

Piping. This should be made up and attached to the ends before joining them to the body section.

Zip fastener. If you wish to use a zip fastener insert this into the seam of the body section before the ends are stitched into place.

Bolster pads

Soft bolster pads can be bought ready made in a limited size range. If you wish to make your own pad, make the cover in the same way as the outer cover but do not add piping. It should be 1.5cm (½") larger all round than the outer cover (for suitable fabrics and soft fillings see Sewing 6, page 400).

Firm bolster. Foam rubber pads are sold without covers. It is advisable to make an inner cover for a foam rubber pad for the reasons described for a cushion with a welt, and the same making up points apply.

To make a bolster

You will need:

Fabric as above. Piping (optional).

Zip fastener (optional). A bolster pad.

☐ Make a circular paper pattern the size of the finished ends (see Design know-how chapter 1, page 28).

☐ Pin the pattern to the fabric, following the cutting layout, and cut out the two ends, not forgetting to add 1.5cm (½") seam allowance all round. Cut a strip for the body section of the finished length, plus 3cm (1") for seams, by the length of the circumference of the circular pattern, plus 3cm (1") for the seams. (If you have enough fabric it is advisable to allow a little extra on this measurement which can be trimmed off after joining if necessary.)

☐ Fold and mark the ends as for the top and bottom of a circular cushion.

☐ On the body section work a line of stitching on the seam lines at the sides of the bolster.

Make 'V'-shaped notches at 2.5cm (1") intervals almost to this line of stitching. This makes it possible to ease the body section on to the ends.

☐ Stitch the body seam, leaving an opening of half to three quarters of its length in the centre to turn through.

☐ Pin the body section to the ends as if fitting the welt on to the top of a circular cushion (fig.2).

☐ Tack and stitch the ends into place taking 1.5cm (½") turnings.

☐ Make 'V'-shaped notches at 2.5cm (1") intervals on the circular pieces and press the turnings on to the body section.

☐ Turn cover to the right side and insert pad. Slip stitch opening.

New seats for old

Cloth — upholstery 2

If you have some tatty old dining chairs tucked away in the attic or picked up cheap from the junk shop, you can strip them of the old coverings and make them as good as new. In this chapter chairs are upholstered with webbing and rubber or plastic foam; in the following chapter a more traditional approach is taken with horsehair stuffing and springs—both good ways of bringing new life into old chairs.

Tools

See Upholstery chapter 1, page 416.

Materials

Webbing. Rubber webbing takes the place of the traditional webbing and springs used in the original upholstery of the chair. It is made from two layers of bias-cut corded fabric with a rubber layer sandwiched in between. This makes it very strong and springy. It is more expensive to buy by length than traditional webbing but, since it eliminates the need for springs, it is more economical in the long run. It is also easier to use and saves a good deal of time.

Buy enough 5cm (2") webbing for three or four strands running from the back of the seat to the front, with one strand running across it—the gaps between the strands should be approximately 5cm (2").

Foam biscuit, polyester or rubber, 2cm ($\frac{3}{4}$") larger all round than the chair seat x 10cm (4") deep.

Upholstery wadding to cover the foam. This material is like cotton wool and sold specially for upholstery, and gives added softness particularly along the edges. Buy enough to extend under the seat if this is where the original upholstery finished.

Cover fabric. You will not want to remove this cover frequently for cleaning, so choose fabric which will not show the dirt or can be cleaned in position. Allow enough to cover the seat, as in the original upholstery, with an extra 5cm-7.5cm (2"-3") all round for turnings and ease of working.

Calico. A piece of this is used as an inner cover under the wadding and top cover. Allow the same amount as for the top cover plus enough for making 15cm (6") wide strips to fit round the perimeter of the foam.

Adhesive with a latex base (such as Bostik 1 or Copydex) or general purpose glue for attaching the calico strips to the foam.

Tacks, 'improved' (with large heads), for attaching the webbing. You will need ten 1.25cm ($\frac{1}{2}$") improved tacks for each strand. For attaching the main upholstery use 1cm ($\frac{3}{8}$") fine tacks. Allow enough to make four rows round the perimeter of the seat, placed at 2.5cm (1") intervals.

Braid, or gimp, for covering the edges and tacks of the cover fabric if this finishes part of the way down the seat frame, or around the bottom of the frame if the upholstery finishes under the seat.

Gimp pins, or a clear adhesive such as Bostik 1, for attaching the braid. Gimp pins have a very small head and are available in several colours.

Black hessian (burlap), slightly larger than the size of the seat, to finish underneath.

Stripping the seat

Follow the method described in Upholstery chapter 1, page 416.

Webbing the seat

As the rubber webbing takes the place of the original webbing and springs, it is attached to the top, rather than the bottom of the seat frame. Mark the position for each strand on the back, front and side rails, and sand down the inner edges of the frame so they will not cut the webbing.

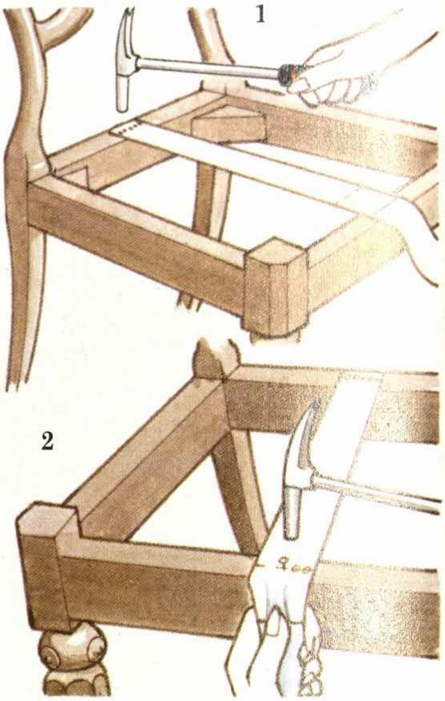
Using the webbing straight from the roll to avoid waste, place one end of the webbing in position with the cut edge just inside the outside edge of the back rail. Tack it down using five tacks placed in a straight line 6mm ($\frac{1}{4}$") from the cut edge. Be careful to position the tacks at right angles to the frame and to tack them down so that the heads are completely flat on the webbing and cannot cut into it (fig.1).

Each strand of webbing should be nine-tenths of the length of the distance it spans, and stretched to fit, so after fixing the strand at the back, mark this measurement on it and stretch it until the mark is in the middle of the front rail (fig.2). Tack in position, placing the tacks on the mark.

Cut off the webbing 6mm ($\frac{1}{4}$") outside the tacks.

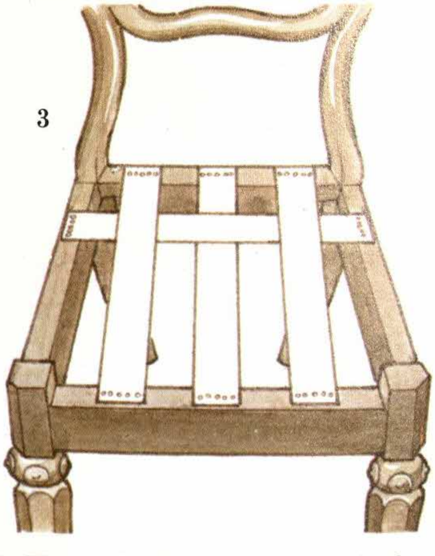
Attach the other strands in the same direction then interlace the cross strip with the other strands (fig.3).

Because the cross strand has to be woven in and out you will find it is best to interlace it through the main webbing first, then tack one side. Mark the place where it reaches the opposite rail unstretched and measure one-tenth of the total measurement back from this. Stretch and tack down on the second mark.



Paul Williams

1, 2. *Hammer tacks on back rail and stretch to tack down at the front.*



3. *Three strands of webbing run back to front and a fourth strand interlaces. Right: supplied by C. H. Frost Ltd.*

ANN & LORNE WELCH
VIRGINIA WOOLF

Padding the seat

If the front legs extend higher than the seat frame and stand up above the level of the seat at the front, cut a piece of 2.5cm (1″) thick foam to size of chair and stick to frame to level the top (fig.4).

Cut out the foam biscuit to the shape of the seat plus 2cm (¾″) all round.

Mark the positions of the back uprights and cut away a piece of foam on each side, smaller than the actual size of the uprights. Mark the centre of each side of the foam and of the chair.

Cut four 15cm (6″) wide calico strips to fit round the perimeter of the foam, making those for the sides and front long enough to overlap at the front corners by 7.5cm-10cm (3″-4″). The strip for the back edge should just fit between the uprights.

Fold the strips in half lengthwise and apply adhesive along them from one long edge up to the fold. Mark a 7.5cm (3″) wide border round the edge of the top of the foam, omitting the area of the uprights, and apply adhesive to it.

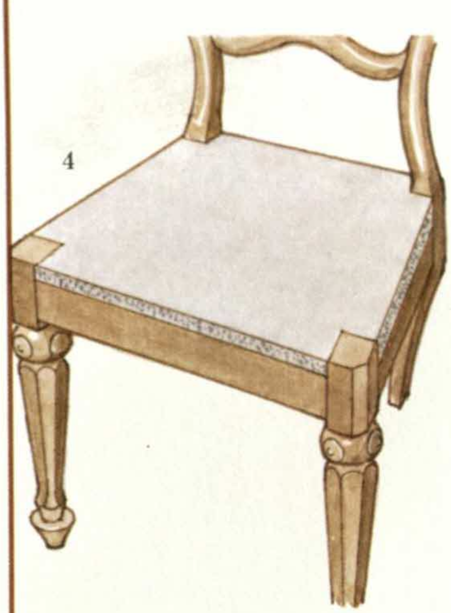
When the adhesive is tacky, stick the calico to the foam, keeping the fold level with the edges. Do not attempt to pull down the edges until thoroughly dry.

Put the foam on to the seat, matching the centre points (fig.5). Roll the excess foam under so that it does not hang over the edge of the seat frame, and tack down the calico strips, keeping the calico smooth and taut (figs.6, 7 and 8).

After the main tacks are in, more can be placed: tack in a wavy line to prevent the strips from ripping (fig.7). Try not to pull the edges down too much or the seat may become too rounded.

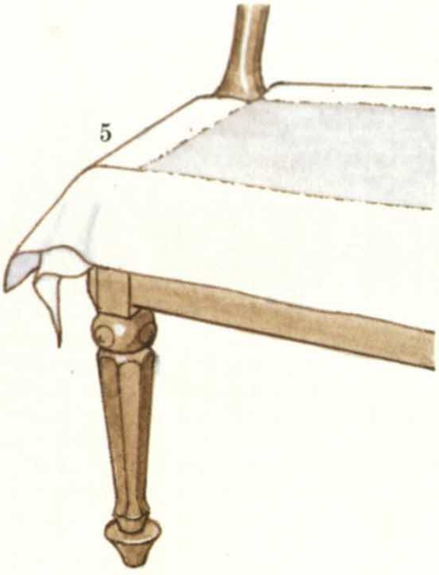
Wrap the calico strips round the front corners before tacking down (fig.9). Trim off excess fabric if necessary.

4



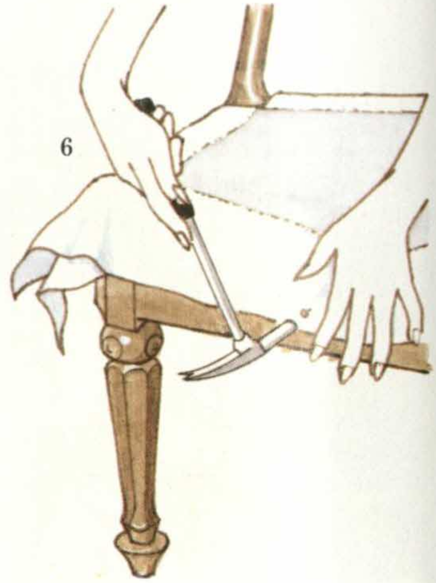
If the front legs extend above the level of the seat cut a piece of foam to size and stick to the chair frame.

5



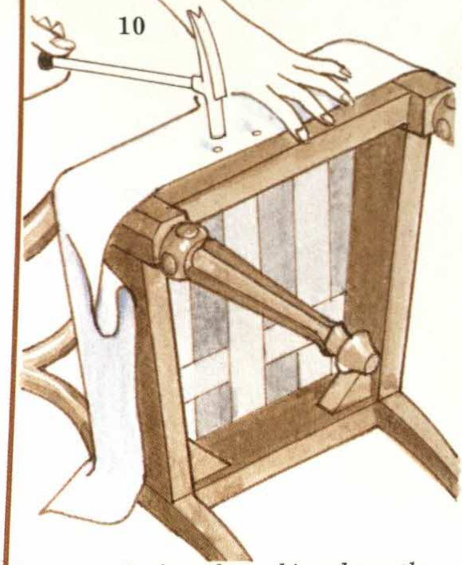
Fold the calico strips in half lengthwise and stick them to the foam biscuit.

6



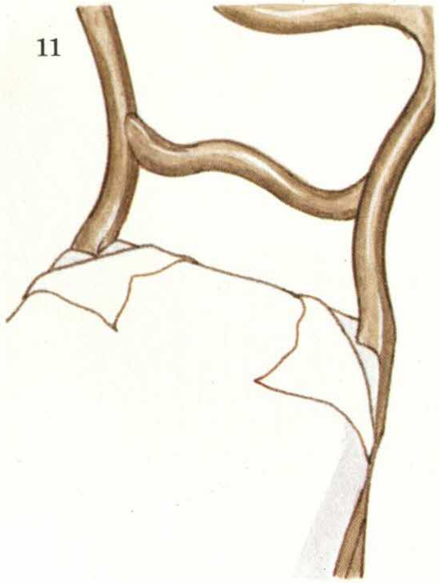
When the glue is dry pull down the edges of the calico strips and tack down.

10



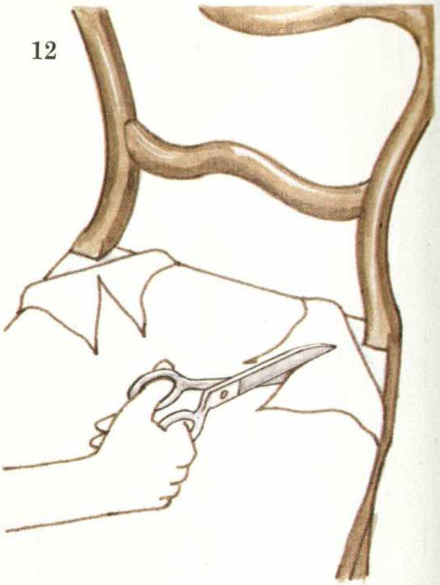
Cover the foam by tacking down the calico inner cover. Keep the fabric smooth.

11



Fold the calico at the back corners of the chair in a triangular shape.

12



Cut diagonally from the corner of the calico to within 1.25cm (½″) of the fold.

Place the calico inner cover over the foam and attach it by tacking down along front, back and sides in that order (fig.10). At the back uprights fold back the fabric diagonally so that the fold just touches them (fig.11).

Cut diagonally from the corner of the fabric to within 1.25cm (½") of the fold (fig.12). Tuck the surplus fabric between the foam and leg, and tack down the fabric (fig.13). Finish the front corners of the calico by cutting them diagonally from corner to the edge of the foam. Fold each piece round the corner, press as flat as possible and tack down (fig.14).

Cut a piece of wadding to fit over and down the sides of the calico or long enough to reach below the chair and to pad the edges if the upholstery finishes underneath (fig.15). Tack in a few places, cutting and overlapping it at the corners.

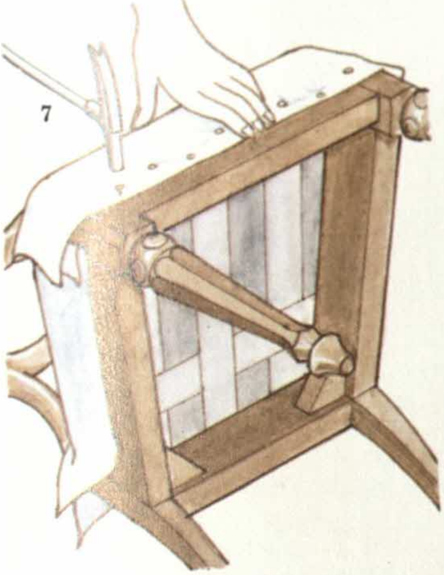
Fitting the cover

Fit the top cover in the same way as the calico, but make pleats at the front corners. If the cover finishes part-way down the frame, trim the raw edge to 6mm (¼") below the tacks and cover with braid or gimp.

If the cover finishes under the seat, tack it 1.25cm (½") from the edge and trim off the excess fabric to within 6mm (¼") of the tacks. Otherwise attach the braid around the bottom of the seat with adhesive carefully applied to the reverse side of the braid.

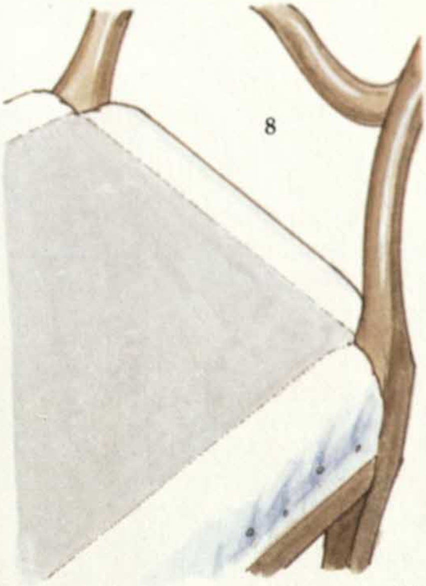
Finish the underneath of the seat with a piece of black hessian or other suitable material. Cut it to the exact size of the seat frame, turn under 6mm (¼") on each side and place it centrally under the seat. Tack in position, mitring the corners for a really neat finish. Turn the chair right way up, ready for use.

7



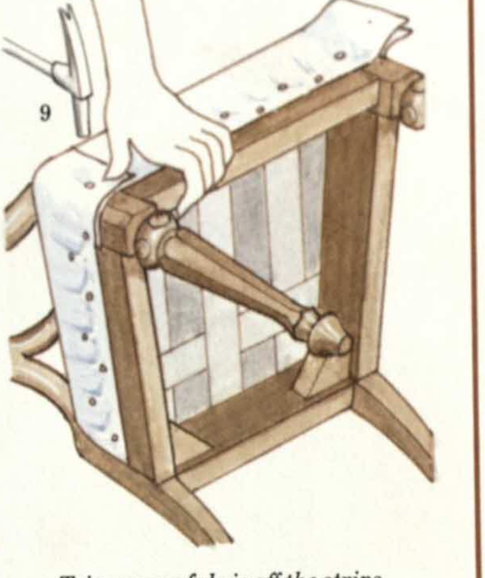
Add more tacks in a wavy line to prevent the calico from tearing.

8



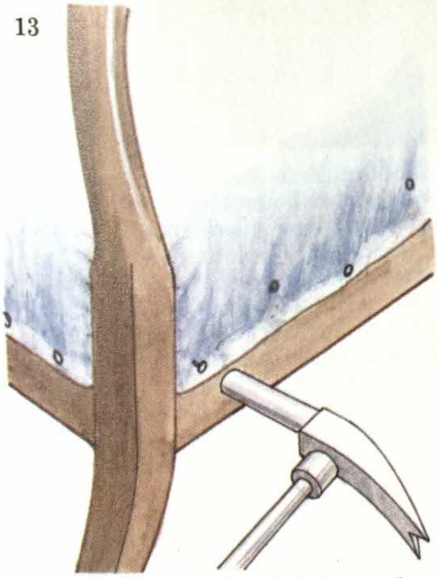
The foam has already been cut at the back uprights. Make sure that it fits snugly between them.

9



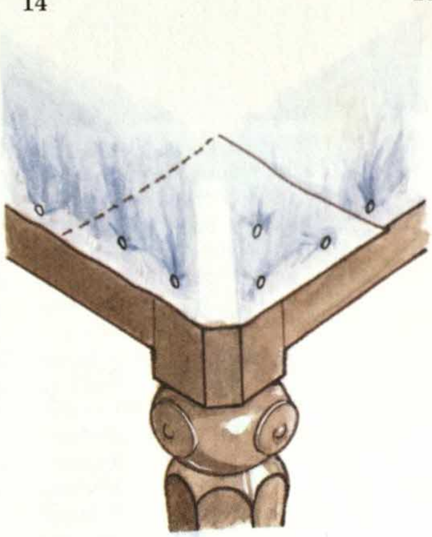
Trim excess fabric off the strips, wrap round the front corners and tack.

13



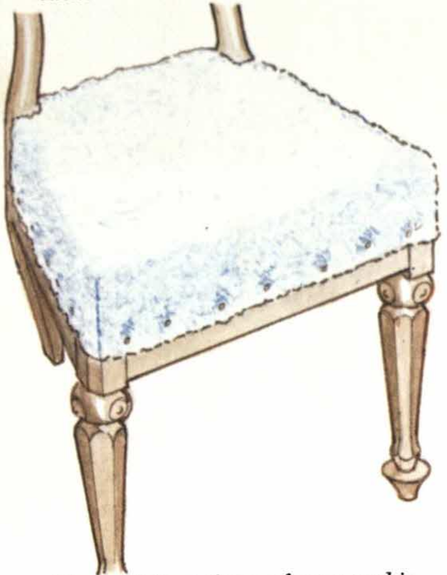
Tuck the surplus fabric between the foam and back upright for a neat finish.

14



At the front of the chair cut the calico, fold round the corner and tack down.

15



The wadding gives softness and is placed in position over the calico. Cut at the corners for a smooth fit.

The secrets of marbling

Colour — marbling 1

Marbling is one of the simplest, most enjoyable and decorative methods of colouring surfaces. With the minimum of skill you can produce bright and lively patterns which are unobtainable by any other means.

Marbling is so called because the wavy and veined patterns which are often produced bear a resemblance to those of true marble. But this simulation is only one way of using the marbling technique because the swirling shapes and patterns you can produce are without limit.

As a general definition, marbling is the creation of designs or patterns on water which are transferred on to other materials. This description, however, leaves a lot unsaid as few other decorative processes give the user such a unique control of colours, yet allow such freedom of movement and creative arrangement of the pattern before the print is made. The final pattern is almost entirely dependent upon the taste and skill of the individual.

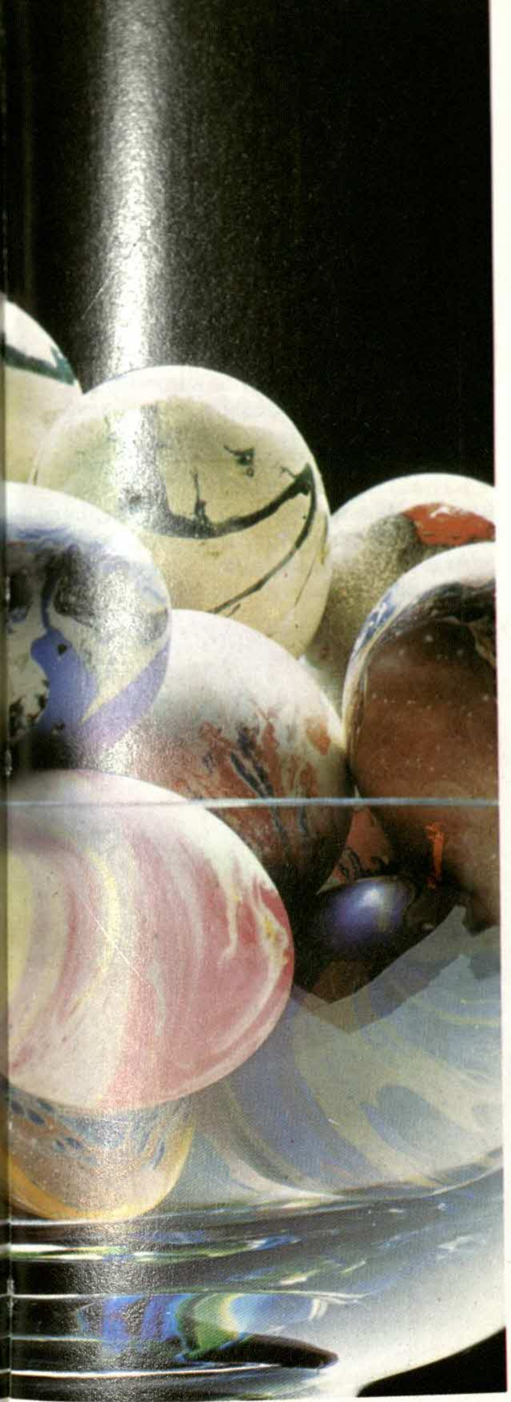
Origins of marbling

Marbling is one of the earliest forms of paper decoration and is thought to have originated in Turkey. The first examples imported into Europe were used to line boxes holding chessmen and dominoes. At one time the best marbled paper was produced in Holland and exported to England wrapped round small parcels of toys to enable it to pass free of duty. On arrival, it was carefully removed from the toys, flattened and sold, mainly to bookbinders for use in their finest bindings. Marbling is still associated with bookbinding and nearly everyone has seen the wonderfully coloured designs on the covers and end papers of old books. But the craft has a wealth of other purposes that have hardly been exploited. Not only paper can be marbled but also wood, plastic, cloth, leather, glass, metal, rubber and even wax.

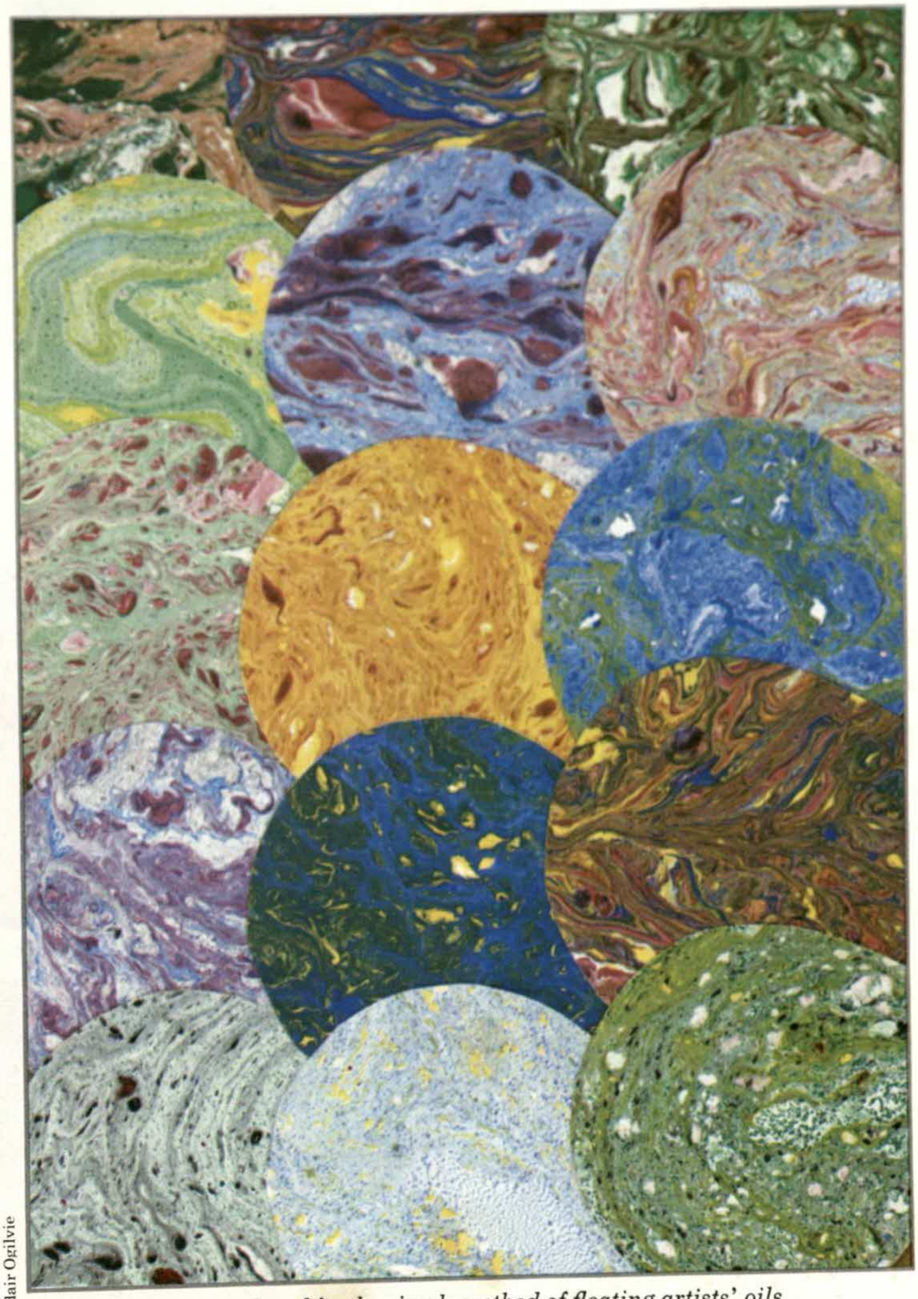
Totally original effects can be obtained by marbling leather handbags, silk scarves, cotton skirts, wooden boxes and lamp bases, plastic mats, glass canisters—almost anything, in fact.

Methods of marbling

Different methods of marbling have long been used by different craftsmen, partly because the process was for a



The variegated patterns of marbling are made basically by floating colours on water. Eggs from David Hicks.



Alasdair Ogilvie

Typical patterns produced by the simple method of floating artists' oils.

long time regarded as a secret art and practised behind locked doors. As might be expected, much traditional secrecy still persists and a number of variations on the basic techniques are still practised. But some of them are better than others for certain effects and surfaces.

Essentially, however, marbling relies upon the adage that oil and water will not mix and the earliest known method is simply this—to float oil colours on water. Later, vegetable colours were also used.

While other, more sophisticated, variations have developed, these two methods are still two of the easiest to work with. Although they do not provide quite the control possible with more complex methods, they can be used on an incredibly wide range of surfaces, are successful with a minimum of practice and can be enjoyed by children and adults alike.

Using artists' oil colours

This method is particularly well-suited to marbling on paper but it can also be used on other materials.

Artists' oils also provide a splendid colour range to work with and patterns can be made using as many colours as you wish.

You will need:

Shallow, water-tight container such as a baking tin or photographic dish with minimum dimensions of 30cm x 38cm (12″x15″).

Packet of powdered gelatine size, available from hardware shops.

Artists' oil paints.

Turpentine substitute such as white spirit.

Sharp instrument, such as a knitting needle, to swirl the colour.

Paint brushes or small stirring sticks—one for each colour.

A few small jars or pots.

Old newspapers.

Sheets of paper.

Paper can be almost any sort but avoid those which are too soft, thin or porous. The best papers to use are white drawing paper, pastel paper and brown craft or other wrapping papers. The paper should be cut slightly smaller than the inside of the 'bath' or container.

Preparing the size. The solution for floating the colours, or size, as it is called, is made by dissolving one dessertspoonful of powdered gelatine size to 0.5lit (1pt) of water. To mix, place the gelatine in the container or tray and pour in a little boiling water, mixing well. When the size has completely dissolved, the remainder of the water can be added from the tap. Allow the prepared solution to stand and cool to normal room temperature.

The container should always be about three-quarters full.

Preparing the colours. Select two or three oil colours and squeeze about 13mm ($\frac{1}{2}$") from each tube into separate pots and dilute until runny with white spirit. Put a paint brush or wooden stick in each pot and keep the diluted colour well stirred.

Testing. Before proceeding it is important to test the colours and size to find their relative working strengths. Using the mixing stick or brush, drop a spot of each colour upon the surface of the size. Ideally, each spot should float on the surface and spread to form a circle of colour about 2.5cm-5cm (1"-2") in diameter.

Should the colour not expand sufficiently it is too thick and needs to be further diluted with white spirit or, if the colour spreads too much, a little more neat colour should be added to each diluted colour.

If the colour sinks straight to the bottom of the container this usually indicates that the size is too thick and needs to be thinned by adding more water.

Sometimes the spots of colour expand and then contract and this shows that either the size is the wrong temperature and should be allowed to cool or, if too cold, warmed slightly to normal room temperature. A little experimentation is necessary to find the right consistency and temperature.

As soon as the colours and size are working satisfactorily you can begin marbling.

Marbling. To start, drop a few drops of each colour on to the surface of the size at regular intervals about 5cm-7.5cm (2"-3") apart.

The most enjoyable and creative stage has now been reached. The floating colours can be positioned by drawing a knitting needle or pointed stick across the surface of the size. The small blobs of colour can be teased, pushed and arranged in swirls, lines or any desired shape or pattern.

The size and water keep the colours from merging so that marvellous, variegated patterns and swirling rainbows of colour are possible.

If necessary, the pattern can be rearranged many times until the desired result is obtained. At no time is it necessary to rush as the colours remain on the surface of the size for some time before sinking.

When you are satisfied with the design, carefully lower a sheet of paper on to the surface of the size, starting at one corner so that no bubbles of air are trapped underneath and no distortion of the colour pattern takes place.

When the entire surface of the paper has been in contact with the colour, lift the paper out with equal care, hold it over the container for a minute to drain and then place it, pattern upwards, on a sheet of old newspaper to dry.

You will soon find that the results will vary not only according to the patterns but also with how much paint is used, the order in which the colours are applied and the colour of the paper.

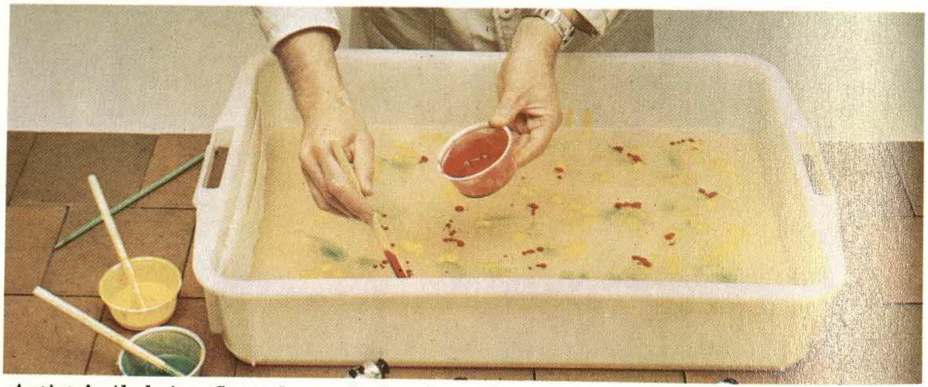
After every print is made, skim the waste colour off the surface of the mixture by using old newspaper cut into strips about 7.5cm (3") wide and as long as the container is wide.

When you have finished, clean out the container with a piece of kitchen paper and white spirit.

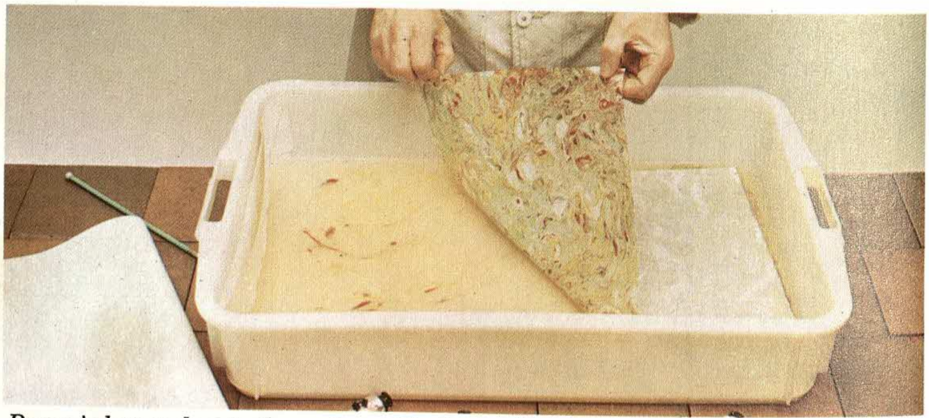
The marbled paper, when fully dry, can be flattened if necessary by placing it under a light weight or smoothing it with a warm domestic iron.

Using vegetable oils

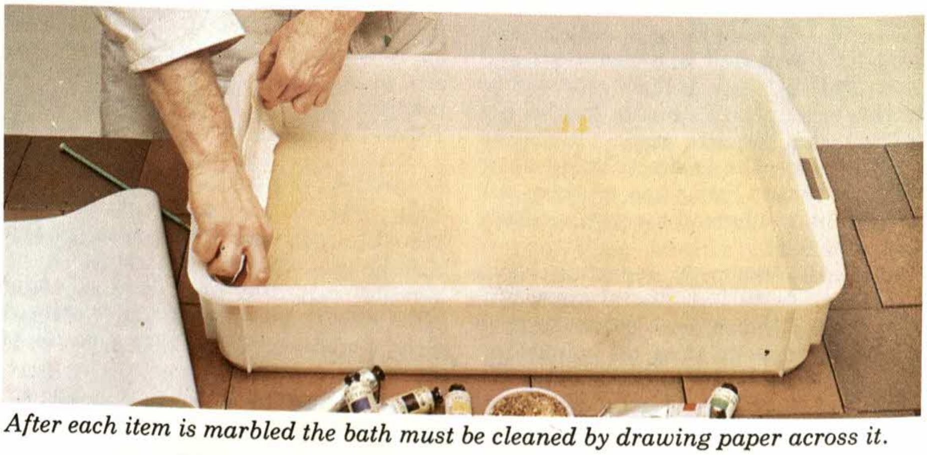
Another simple marbling technique involves the use of specially-produced colours, often with a banana oil base, which are sold specially for marbling. While the number of colours is limited



Artists' oils being floated on gelatine size. The size causes them to float.



Paper is lowered on to the surface of bath to collect the patterned colour.



After each item is marbled the bath must be cleaned by drawing paper across it.

Dick Miller

the number of surfaces that can be marbled is enormous. Banana oil colours will marble paper, fabric, wood, glass, metal and wax. They can be managed by a child or used to produce more sophisticated effects, such as tortoise-shell, by experienced craftsmen.

The colours are floated on water and the procedure, with certain exceptions, is similar to that of using artists' oils. In the same way, vegetable oil-based colours will not mix when placed side by side in the bath, but different shades can be dropped on top of each other to mix.

The bath. To marble flat surfaces like cloth and paper, use a shallow tray; larger objects, such as wooden boxes, candles, or tins, require a container such as a bowl or bucket that is deep enough to immerse the object.

Vegetable oil-based colours are floated on water at room temperature, but if you live in a hard water area it may be necessary to add borax or a water softener if colours do not spread of their own accord. Add one heaped handful of borax per bucket of water.

Floating colours. Use only a few drops of colour, applied preferably with a dropper, and marble as soon as you have patterned the colours because they dry very quickly.

Marbling paper or cloth. Swirl your colours with a wire or stick, then lay the material carefully on the water, leave it for a moment then peel it off and allow to dry. Cloth is ready to be peeled off when the pattern shows through to the other side. This may also happen in lighter weights of paper. After 24 hours the colour will have set sufficiently to allow fabric to be washed. Use close-woven fabrics only, not wool. Leather can also be marbled in this way.

Marbling objects. Many objects, particularly metal and glass, should be given an undercoat of emulsion paint before marbling. Although white is probably best for showing colours, others can be used to give special contrast. If you wish glass to retain its transparency, then undercoat with gold size instead of paint. Gold size is available at art supply shops.

Candles should be marbled direct.

Instead of laying objects on the surface of the water as with cloth or paper, dip them completely into it and they will collect the colour as they pass through the floating surface colours. Do not roll objects across the surface as they will collect too much pigment. If your container is big enough you can marble several items by dipping them in quick succession.

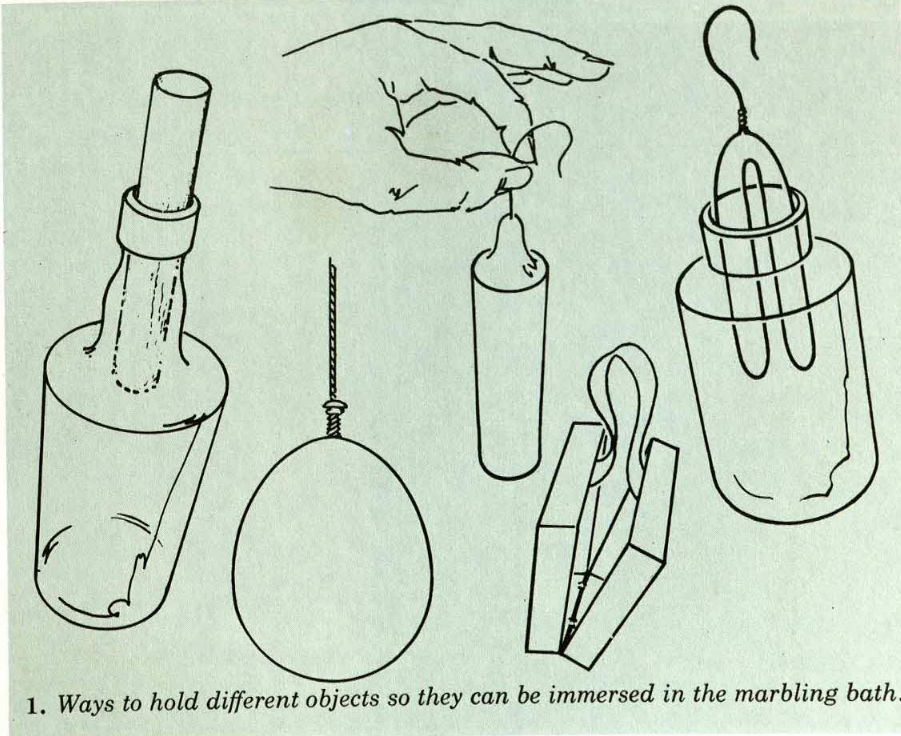
When taking objects out of the container, swirl the colour out of the way with a stick so the objects will not be marbled twice.

Melvin Grey

Table covered in marbled paper.

It often requires some ingenuity to completely immerse an object and yet allow the entire surface to be exposed to colour. Candles can, of course, be held by their wicks. Round objects like wooden eggs will need a tiny screw in one end with a string attached. The hole can be filled with plastic wood or coloured later. Boxes can have tape attached to the inside of top and bottom and looped out to form a temporary 'handle', while dowel sticks and crumpled wire coat hangers inserted in bottles help to control them in the bath (fig.1).

To give greater durability and gloss after marbling, varnish items with at least two coats of clear polyurethane varnish, sanding between each coat.



1. *Ways to hold different objects so they can be immersed in the marbling bath.*

Trevor Lawrence

Tin can punching

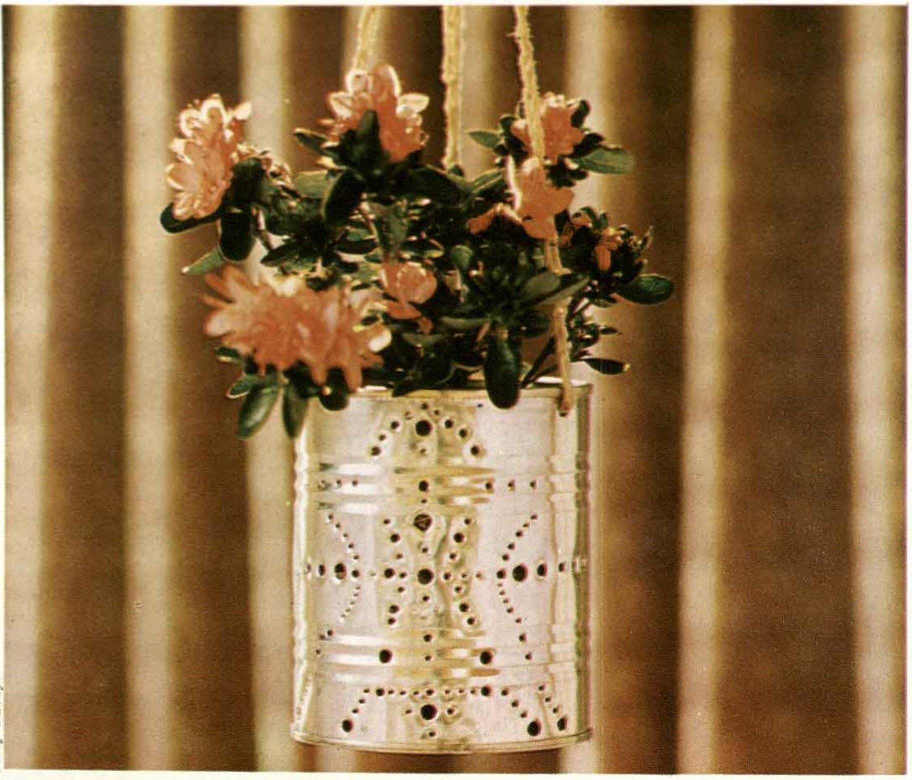
Metal 7

Apart from paper, tin cans are probably the greatest throw-away items in any dustbin. They come in a variety of shapes and sizes, from ordinary round cans to the more unusual shapes often used for pâtés. Some cans incorporate a corrugated design in the curved surface. The catering trade buys fruit juices in large tin cans which invariably end up on the rubbish heap in just the same way as the cans which we buy and take home.

The natural resources of the earth are dwindling away and, although it is impossible to replace them, everyone can certainly attempt to conserve and make better use of them.

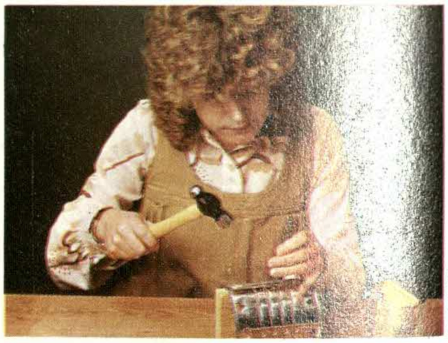
A tin can, once empty, has served its obvious purpose but, instead of throwing it away, why not spend a little time punching a design in the tin and then using it as a candle-holder or a receptacle for pot plants?

You can attach pieces of wire to the tin cans, fill them with trailing plants and suspend them from the ceiling. You can also use them for candle-holders, letting the holes in the tin form an intricate pattern of light spots around the room.



Jerry Tubby

The punched tin cans make attractive holders. Designed by Tony Wilson.

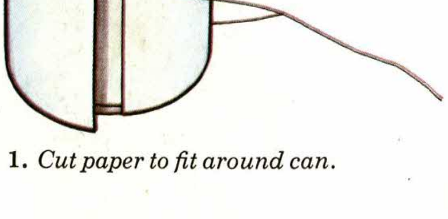


Dick Miller

Position for punching cans.

Designs

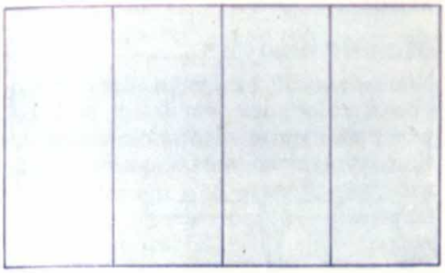
You may feel that there is a limited number of things to do with tin cans, but you can make them more interesting by working out designs for them rather than punching holes at random. To do this cut a piece of plain paper to fit around a tin can (fig.1).



Paul Williams

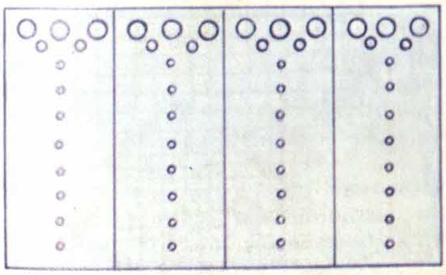
1. *Cut paper to fit around can.*

Open the piece of paper to a flat surface and divide it into a number of sections of equal size. You can measure the sections to make them exactly the same or you can judge the size by eye (fig.2). The number of sections does

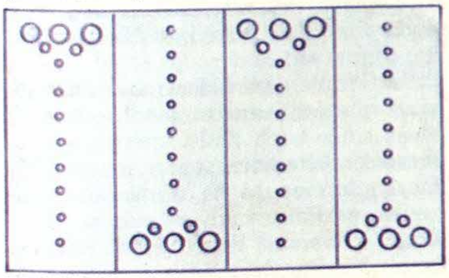


2. *Divide paper into sections.*

not matter, but the larger the tin can the more sections you should make. In each section draw circles to the size you want to punch the holes and repeat pattern in each section (fig.3). Or you can reverse them in alternate sections (fig.4). Use a ruler or tape measure to help you with straight lines and a cup or saucer for curved lines.



3. *Draw the pattern on to the paper indicating the size and shape of the holes you wish to punch.*

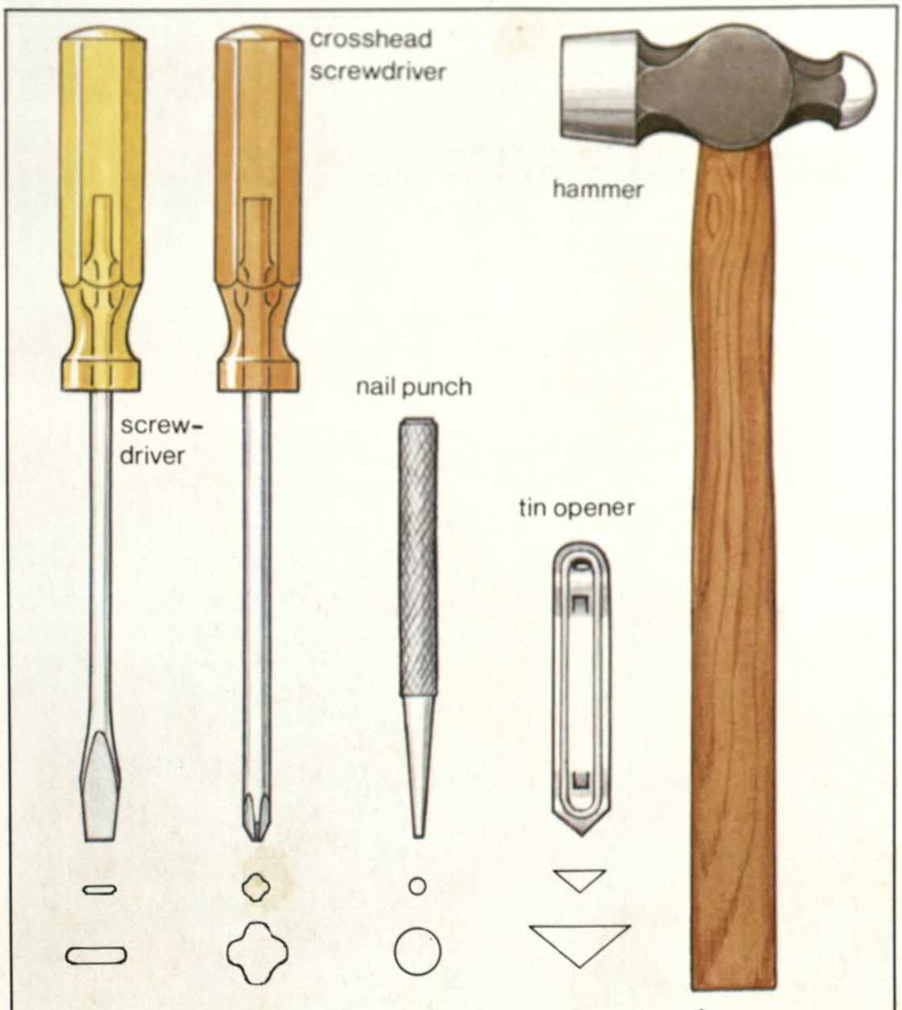


4. *The designs are easy to change. Any one design can be varied by reversing the pattern in alternate sections.*

You can make very intricate designs and you can also vary the shape of the holes by using different implements as your punching tools.

Tools

You will need:
Hammer.
Nail-punch or large nail for round holes. An old screwdriver will make elongated holes—the larger the screwdriver the closer to a straight line the hole will be. You will damage a good screwdriver if you use it for punching tins, so use an old one.
Tin opener (of the type used for soft drinks or beer cans) will make triangular-shaped holes.
A piece of wood or dowel large enough to fit neatly inside the cans.



Tools required for punching indicating the various shapes.

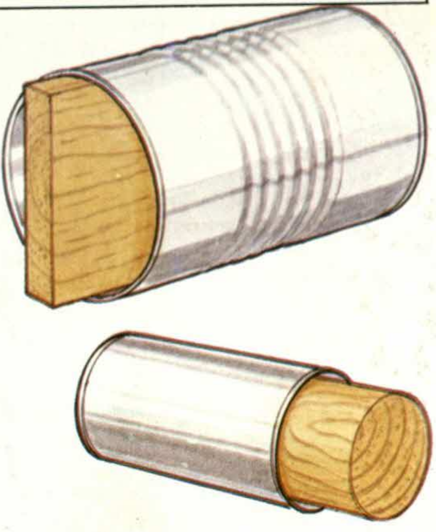
Punching

Prepare the tin cans by cleaning them and removing the labels. If there are any sharp edges around the lip of the cans use the hammer to flatten them and smooth the surface.

To punch. If you punch holes from the bottom towards the open end, the can will dent and lose its shape. To avoid this the can should be supported from the inside. Any piece of wood or dowel can be used for this purpose. Insert a block inside the tin can where you are about to punch holes (fig.5). Or slide a length of thick dowel into the can (fig.6).

Wrap the design around the tin can and secure it by taping the ends together. Use the nail-punch and hammer to make holes at the required spots. If you want to re-use the design make very light indents in the tin can and remove the paper design before actually punching the holes in the can. Alternatively, trace the design before attaching and punching the holes.

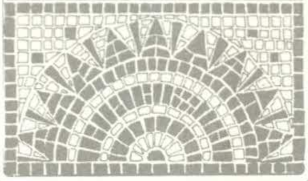
If you use the tin cans for plant pots, paint or varnish them to prevent them from rusting.

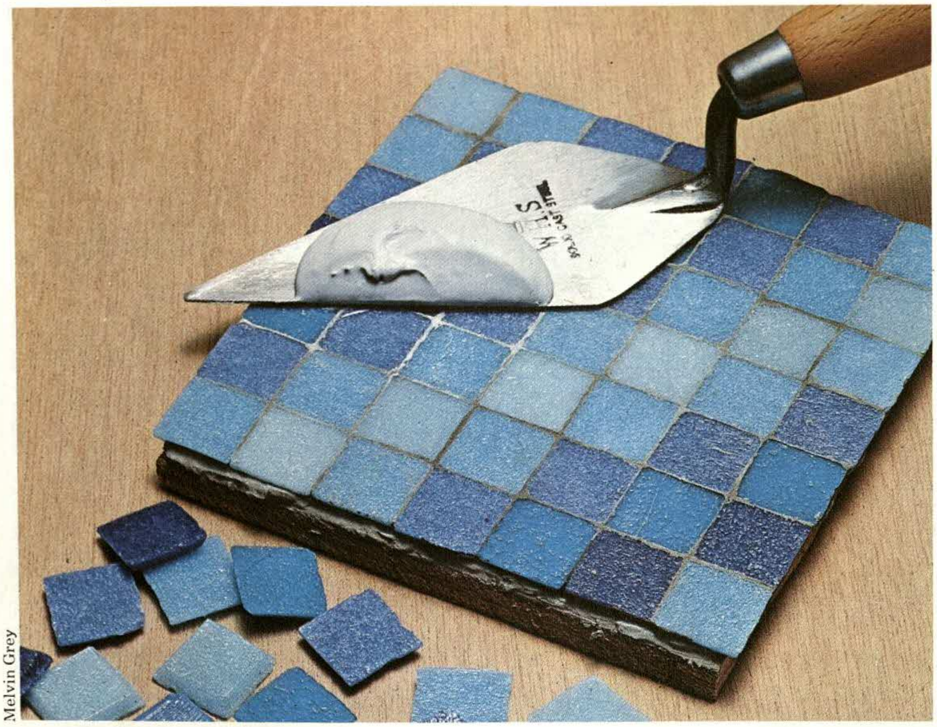


5, 6. *To prevent can from buckling while being punched insert a piece of wood to support the can.*

Beginning to lay mosaics

Mosaic 2





Melvin Grey

Vitreous glass is the classic mosaic material and can be bought in a range of brilliant or soft colours.

It seems to be the ambition of everyone interested in mosaic to make a mosaic table and, surprisingly enough, this is not difficult for a beginner. In a big, bold table design the tesserae—as all stones used in mosaic are called—do not necessarily need cutting and shaping but can be used full-sized. You simply lay them down in a pattern.

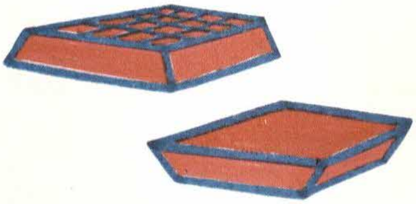
Another advantage of starting mosaic with a large item such as a table is that suppliers will not sell less than 30cm sq (12″sq) of tesserae in any given colour, so to begin you must automatically become the owner of a considerable quantity.

Beginners in mosaic should be warned about one thing—mosaic work is at some stages a pretty messy business because it involves mixing cement. It is therefore a great asset to have a work area such as a junk room, garden shed or attic where you do not have to be too careful of your surroundings and where you can leave the work undisturbed to dry for several days.

Tesserae

There are many kinds of stones, or tesserae, that can be used in mosaic—marble, glazed and unglazed ceramic tiles and smooth pebbles, to name just a few—but the classic mosaic material is glass.

Vitreous glass squares can be bought in a standard size of 2cm (¾″) each from any mosaic dealer. The front of each square is perfectly flat and the back is bevelled, as illustrated in fig.1.



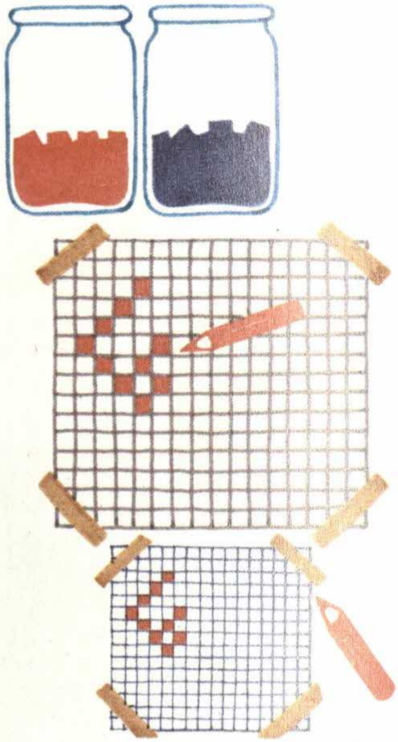
1. *Each glass mosaic square is bevelled and has incised lines on the back to give better grip.*

The bevelled side also has a pattern or grid of lightly incised lines. Both features are designed for better grip and adhesion when the squares are applied to a surface.

The price of glass mosaic varies greatly according to the colour range, gold—as you might imagine—being the most expensive. To some extent the cost may determine your choice of colours but do be sure to select colours which will give a strong contrast of light and dark.

Mosaic designs

You can work the design illustrated or you can plot your own design on graph paper as long as you stick to designs that involve the use of squares (fig.2).



Victoria Drew

2. *Designs are worked out in graph paper first. Jars keep colours separated.*

Cross stitch embroidery and canvas-work patterns are a good source of ideas since each little square can represent one tessera. Another source of inspiration could be a modern geometric painting such as one by Mondrian. Remember that the designs must be confined to those with straight lines and right angles which do not involve cutting or shaping the square tesserae.

Mosaic table top

The materials below are given for a table top 48cm x 96cm (18″x36″).

You will need:

Sheet of paper 48cm x 96cm (18″x36″).

Sheet of 1.25cm (½″) blockboard or marine plywood 48cm x 96cm (18″x36″).

0.28lit (½pt) of a polyvinyl acetate glue which can be diluted with water, yet sets waterproof, such as Unibond or Polybond.

0.5sq m (5sq ft) of vitreous glass mosaic in the colours you require.

2 x 3kg (7lb) bags of grey portland cement.
Large container for mixing cement in, such as old plastic washing-up bowl.
Trowel.
Cement comb (optional).
Old rags, and for sensitive hands, rubber gloves.
Jam jars for storing tesserae.
Thick, blunt pencil. Ruler.
Adhesive tape. Paper adhesive such as gloy.
Silicone wax or furniture polish.

Most of these materials such as glue, trowel, cement and cement comb and PVA glue are obtainable in hardware and DIY shops. The DIY shop or your local timber merchant will supply you with blockboard or marine plywood for supporting your mosaic. No matter what shopkeepers may tell you, do not buy chipboard or external quality plywood as it will almost certainly warp. Laminated board is suitable but it is very expensive.

Preparation

Put different colours of tesserae into separate jars so that you can easily find the colour you want when you are ready to begin.

Decide on a proper working area, preferably one in which you can leave the mosaic for a time (the messy stages come later). Place the blockboard on a work table and tape the sheet of paper securely to it.

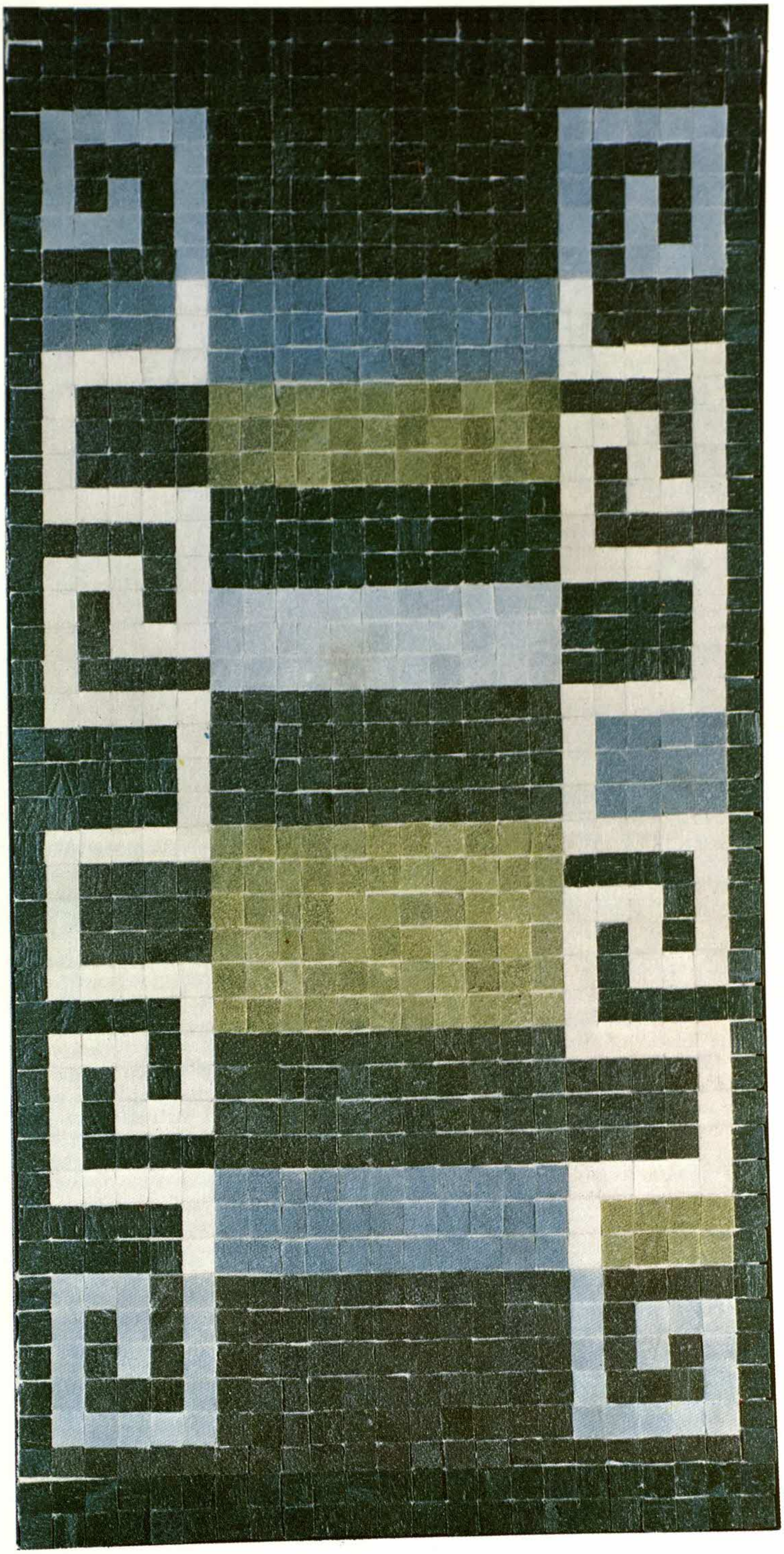
Begin to draw the design. First work out your design in miniature on graph paper. Then divide the working sheet into graph-like squares, each square representing one piece of mosaic (fig.2). Since the size of your table (and paper) is 48cm x 96cm (18"x 36") and each tessera is 2cm (¾"), it looks at first glance as though there should be 48 squares in the length and 24 in the width, but this is not so. You have to allow for cement joins between each square.

So divide your paper into 46 squares in length and into 23 squares across. In this way each square will be only a fraction larger than 2cm (¾") and the difference is made by using a blunt pencil which gives a thicker line round each square. This may sound imprecise, but you will see how it works out as you progress.

When the grid is completed, fill in the actual shape of the pattern lightly with pencil. Use the colours in the mosaic if you wish. Now you are ready to begin laying the tesserae.

Laying tesserae

Tesserae are not laid directly into cement. Instead, each square is glued with paper adhesive face down on to paper and the whole design is embedded into the cement later on. Although this

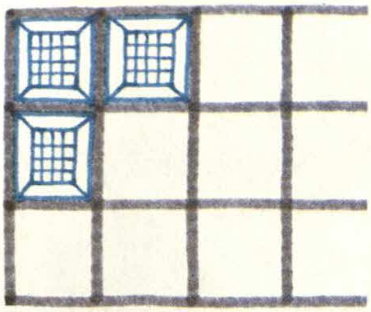


Alasdair Ogilvie

Simple, yet subtle mosaic pattern is based on the traditional Greek key design.

is a much easier way of working it means that for the time being you will be working in reverse. The mosaic will be stuck face down, leaving the bevelled side facing you. (As the design in this chapter does not have an 'up and down' or 'right and left' side, you will not have to worry about actually thinking in reverse.)

Start at the top left hand corner of the paper. Pick up the mosaic stones one at a time and give each a dab of glue on the flat, ie right, side. Then put each stone firmly into place, face down, leaving the thickness of black line between each tessera (fig.3).


Victoria Drew

3. *Glue mosaic face down on paper. The pencil lines leave spaces for cement.*

Do not use too much glue or the paper may buckle. Worse still, the tesserae may slide around and fail to keep their place in the design.

Work about 30cm sq (1sq ft) in this way and then weight the mosaic down with heavy books to dry in the same way as you did for paper mosaic (Mosaic 1, page 412) and for the same reasons.

Before you lay each piece of mosaic, examine it closely. Being mass-produced, some tesserae are imperfect and whereas a certain irregularity is part of the charm of glass mosaic, pieces that are badly misshapen or have broken corners should be rejected. (They can come in useful later when you start to cut mosaic.)

When the entire mosaic has been laid, leave it under weights for a day or two until you are absolutely sure it is dry.

Cementing

Preparing to cement. If until now you have been working in a room with a carpet or household furniture near or under you, the moment has come to move—to the garden shed if necessary. Failing any such place, spread a sheet of polythene to protect the floor where you are working and put several layers of newspaper on the table. No matter where you work you will need a flat surface to hold the board and you will need to leave it there for several days after it is cemented.

Remove or cut the tape binding the paper to the board and carefully slip the board from underneath the tesserae-covered paper.

Prepare the board by priming each side with a mixture of one part water-soluble glue (remember it must be the kind that sets waterproof) and three parts water, mixed in a large jam jar. You will eventually need as much as 1.2lit (2pt), but this can be mixed in several batches if you prefer. Allow one side to dry for two hours before priming the other. When you have finished be sure to wash your brush out well. Once it has dried the glue is no longer water-soluble. For priming do not use a brush which has a trace of oil or turpentine on it for this may wreck the cement adhesion.

If the priming brings up the grain of the board, and makes it rough to touch, so much the better, because it will help to provide better adherence for your cement mixture.

To mix the cement. Up to 0.9kg (2lb) of cement is needed for every 30cm sq (1sq ft). For the table put about 2.7kg (6lb) into a mixing container and make a hole in the middle as if you were making pastry.

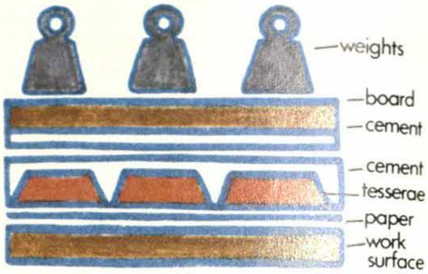
Gradually pour in some of the same glue mixture used for priming the board. Stir well until you get a fluffy paste, rather like whipped cream, which just about keeps its shape. It is impossible to say how much liquid you will need because so much depends on the way you mix it but, broadly speaking, 0.5lit (1pt) should be enough. Take great care not to add too much glue, however. To soften the mixture, work it well rather than adding more diluted glue.

Applying cement. When you have the right consistency—and this will take a bit of hard work—spread the mixture evenly with a trowel over the backs of the tesserae. The joins between the stones will fill up as you spread the first layer. Continue until the whole mosaic is covered with an even layer of cement about 3mm ($\frac{1}{8}''$) thick. The outlines of the tesserae will be barely discernible.

Then, immediately as you have no time to lose, mix another batch of cement with glue mixture but this time only 1.4kg (3lb)—half as much as before—and spread it on the board in a thin, even coat. If you use a cement comb for spreading the cement you will find it easier to get an even distribution.

Applying cemented tesserae. You must now unite the two cemented surfaces by putting the board down over the sheet of mosaic. If possible, get someone to help you lower the board on to the tesserae as it is difficult to manage alone and once put down there is little possibility for adjustment.

When it is in place, cover the top of the board with weights and leave it for a week (fig.4). If you are using an old work table you might drive a couple of nails half-way in on each side of the board (not through it) to keep the mosaic from being jostled.



4. *After cementing, mosaic is weighted down to dry for a week.*

Be sure to check the outside edge of the mosaic and push back in place any overflowing cement.

If the work is to be left in a shed or other outbuilding, make sure there is no chance of frost.

Cleaning up. Throw left-over cement into the dustbin, not down the drain, and wash out the mixing bowl and trowel thoroughly. Keep any diluted glue because it will be needed at the end of the week. Unmixed cement can also be kept if the bag is carefully closed. Otherwise it may deteriorate.

Cleaning the surface

The final stage consists of taking off the weights and turning the board right side up so that the surface can be cleaned and grouted.

Facing you will be a rather stained piece of paper with the dim outline of the underlying tesserae.

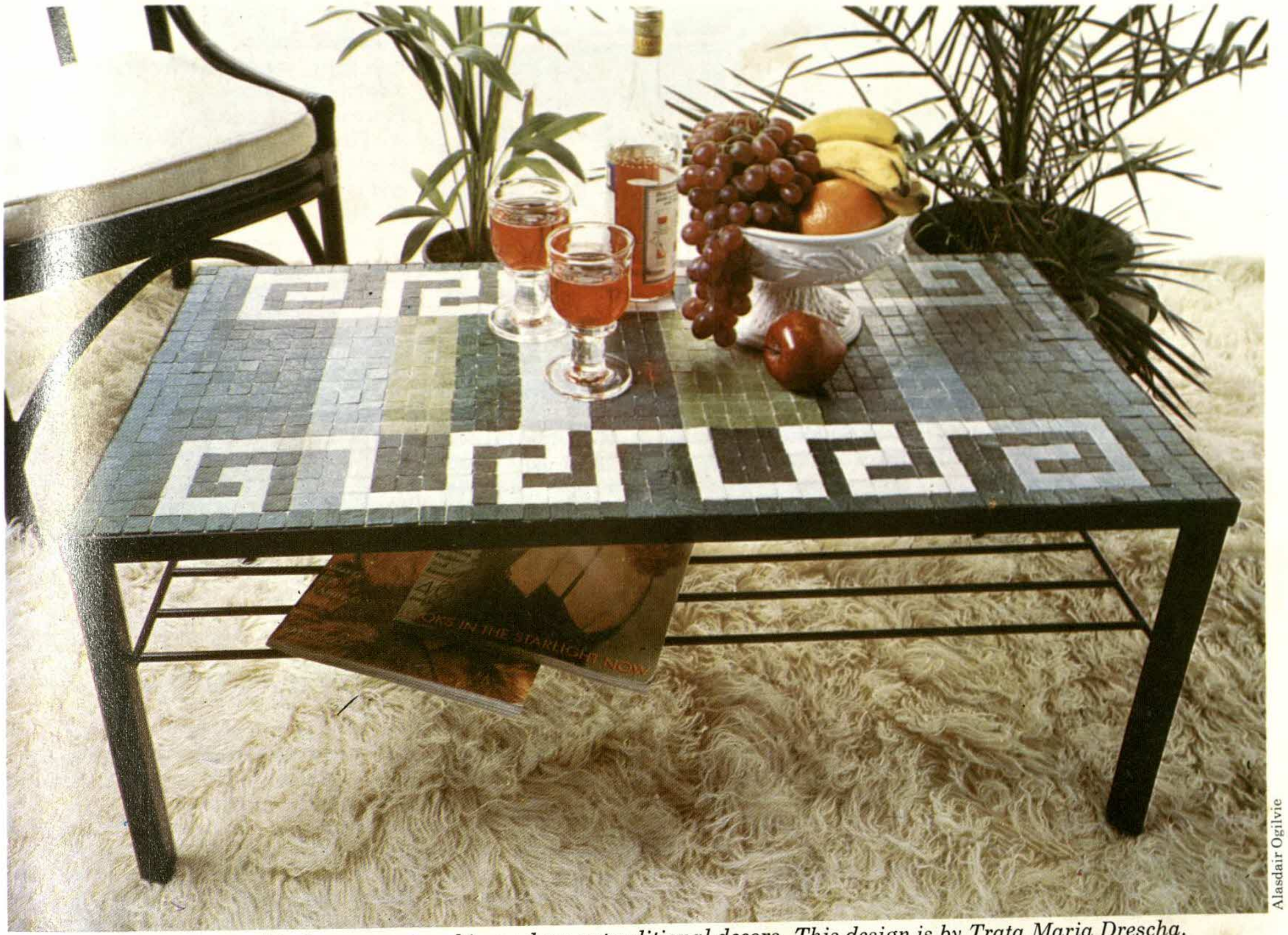
Resist the temptation to pull the paper off. Get a rag and a bowl of hot water and soak the paper well, going over and over it until the hot water penetrates to the gum beneath and you feel it ready to move. At this stage your paper should come away in two or three big sections—if not, then go on wetting it patiently.

When it is finally revealed, the design will still be in need of a good deal of cleaning to get rid of the gum on the surface and any remaining bits of paper which have stuck in the joins. Possibly some cement will have moved forward to the front of the design.

Scrub vigorously with a nylon scouring pad and hot water. Do not use a metallic cleansing pad as tiny particles will get into the cement, and rust.

Final grouting. There will be many small gaps between the squares and these must now be filled. Use the same diluted glue and cement mixture as before, only this time rub it into the

Steve Bicknell



Mosaic tables can be used indoors or out and in modern or traditional decors. This design is by Trata Maria Drescha.

front of the mosaic so that it fills in any remaining gaps in the joins.

This is a rather discouraging moment. No sooner is the surface clean than you must make it dirty again. You can use your fingers to rub the cement into the joins or you can use a large screwdriver or other similarly shaped tool.

When all the joins appear to be filled take a handful of absolutely dry cement and sprinkle it over the surface. Make a firm pad out of an old rag and rub it vigorously all over the mosaic. The dry cement will be pushed partly into the joins and partly over the edge of the board. The harder and faster you rub, the tighter and better grouted the joins will be.

Now sweep up all loose particles of cement and leave the mosaic overnight to set. It will look rather grey and dusty but no actual lumps of cement should be stuck to the surface.

Wash the surface the next day with detergent liquid and hot water, drying it as you go.

If it still looks grey (the grain of some mosaic has a stronger tendency than others to pick up cement dust) dip some cotton wool in pickling strength vinegar (acetic acid), available from pharmacies, and rub it all over the surface. The acid will neutralize the alkali of the cement and the grey will disappear.

When thoroughly dry, wax with a good, colourless silicone wax or furniture polish. This will bring out the colour and also help to make the joins more resistant to spilt liquids and general dirt.

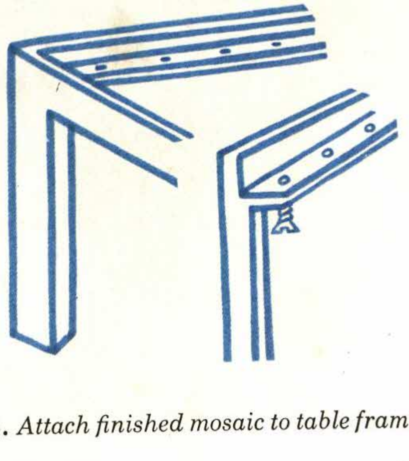
Finally, paint the underside of the board with a coat of oil paint. This will prevent the wood from warping and counteract any slight warp that may have developed during the drying process because of inadequate weighting.

Making a table

There are two simple ways to turn your splendid slab of mosaic into a coffee table. The simplest is to buy a metal table frame, constructed for the purpose, and screw the board into the angle irons (they have holes already drilled in the iron for this) (fig.5). You must grout in the little gaps which will inevitably exist between your mosaic and the metal frame. This can be done during the final grouting, described above, to save additional cleaning of the surface.

Alternatively, you can frame the mosaic with strips of hardwood beading 2.5cm x 6mm (1″x¼″) glued to the sides of the board. The wood should have two coats of polyurethane before you attach it so that it will not change colour or be affected by any spot grouting which may be necessary round the edges. The frame should be masked with tape before you try to grout any gaps.

To complete the table buy a set of wooden legs and attach these by screwing into the board underneath.



5. *Attach finished mosaic to table frame.*

Multi-coloured schemes

Design know-how 16

In previous chapters all sorts of colour schemes have been looked at—monochrome, which needs texture if it isn't to be dull, related colours, which are usually easy to handle if sometimes unadventurous, and complementary (contrast) colours.

Polychromatic schemes, ie multicoloured, need to be very disciplined and economical if mixtures of the hues of the rainbow are to be used. Your scheme must hang together rather than look like an ill-conceived jumble.

To start with: vivid, strong colours catch the eye, 'cut up' an area, separating one part from another and making an object seem smaller. Intense colours in combination will be highly stimulating—too powerful for large areas. Keep the use of mixed, intense colours, such as red, orange and violet, to small doses. Subtle colour changes will on the other hand create space and enlarge an area. A band of neutral colour separating very bright colours will have the same effect.

So—which colours to choose? Apart from throwing all and every colour together in a hit and miss way, observe which colour combinations work together. Look at the three successful examples of fabrics shown here. Each uses a multi-coloured scheme and the principles in each relate as well to a room colour scheme, a woven rug, a jersey or a painted toy.

What are the common denominators in all these designs?

Similar intensity or colour brilliance. A greyish blue will look good near other greyish colours but will seem washed out next to strongly coloured neighbours.

Similar tonal value, or the lightness or darkness of a colour.

One predominating colour; the other colours are secondary in weight or area.

There are no hard and fast rules, of course, to decide which colours go together and which don't. Use the colour wheel given in Design know-how chapter 12, page 336, to find a few examples of different colour combinations.

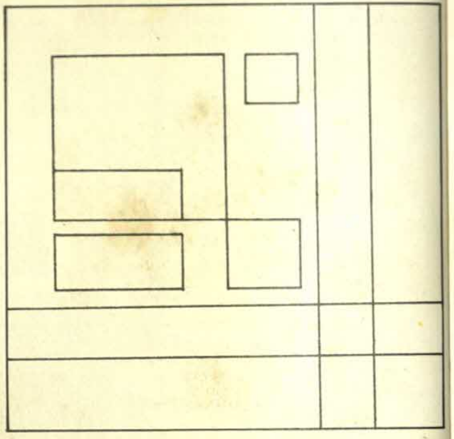
You may find that a group of three colours spaced at equal intervals around the circle will be a good jumping-off point for the use of several colours. One group will combine red, yellow and blue—colours in medieval stained glass and Egyptian decoration. Another group will be orange, green and violet—a combination often used in modern painting.

Try the following experiment in multicolours, and remember, there is no one 'right' answer, although some combinations will work better than others.

You will need:
Felt pens, water colours or pages from a colour magazine.
Piece of white paper.

A. Draw a design (like the diagram below) and fill it in with a complete riot of colour. Does this work?

B. Next, try using colours based on the fabrics below, taking care to use one colour as a background to hold the rest together. Keep on working until the design feels satisfactory.

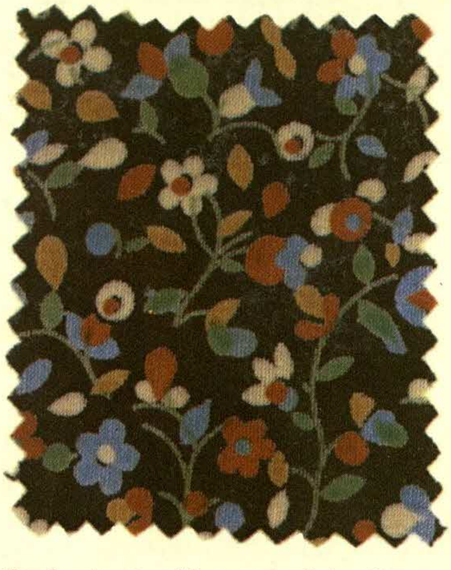


Draw a design and fill in with colour.

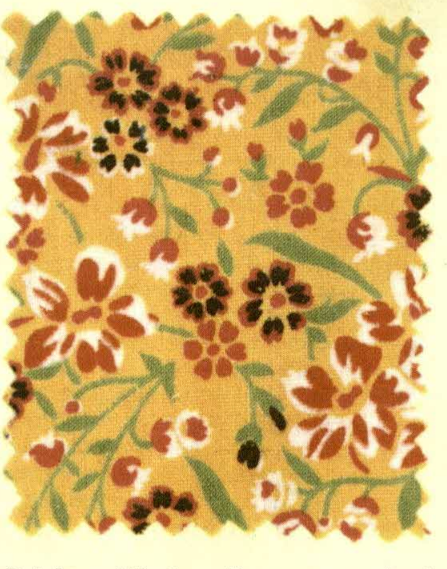
Now visualize the same combination of colours as a potato print design, woven together in a rug, or batik.

C. Pick four or five other colours and combine these. Try a neutral background such as beige or white. Does this help? Very often you will need to use one colour in higher proportion than the others just to give balance and to hold the design together.

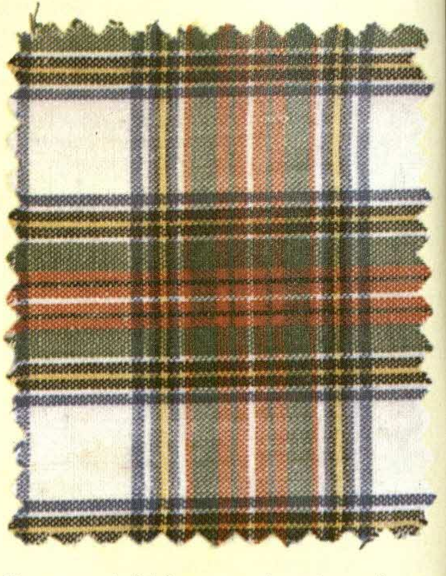
Of course, you don't have to stick to any particular range of colours; there's no need to play safe, it's just a question of experimentation and of keeping your eyes open until you get the effect you want.



Predominating blues and subdued tones.



Bright and lively: yellow, green and red.



Create a plaid from overlapping colours.

606 Cobalt
Tint